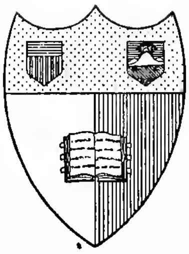

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UNITED STATES FUEL ADMINISTRATION

DR. H. A. GARFIELD, Fuel Administrator

REPORT OF
ENGINEERS COMMITTEE
1918–1919

WASHINGTON
GOVERNMENT PRINTING OFFICE
1919

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LETTER OF SUBMITTAL.

July 1, 1919.

Dr. H. A. Garfield,
United States Fuel Administrator, Washington, D. C.

Dear Sir: We beg to submit herewith the final report of the Engineers Committee.

Respectfully, yours,

Cyrus Garnsey, Jr.,
R. V. Norris,
Jas. H. Allport,
Engineers Committee.

REPORT OF ENGINEERS COMMITTEE.

The Engineers Committee of the United States Fuel Administration was organized early in January, 1918, with Cyrus Garnsey, jr., of Memphis, Tenn., retired coal operator, Robert V. Norris, of Wilkes-Barre, Pa., and James H. Allport, of Barnesboro, Pa., consulting mining engineers, as members.

The principal work of the committee was the study of costs of coal mining throughout the United States and the preparation and submission to the United States Fuel Administrator of cost data so arranged as to assist him in fixing coal prices for the entire country.

The first work of the committee was a study of the price-fixing problems as applied to coal and the development of methods of studying and reporting costs to allow of the scientific fixing of prices.

This study has been reported by the committee in a paper read before the American Institute of Mining Engineers at its Colorado meeting, September, 1918, and printed in volume 61 of its Transactions. As this paper gives a fair outline of the study made and methods adopted it has been freely extracted in this report.

NECESSITY FOR PRICE FIXING.

During the latter part of 1916 and the early months of 1917, due to war activities, there was a threatened shortage of coal, which resulted in panic among consumers and a rush to obtain coal at once at any price. As a result of this insistent demand for immediate delivery, prices were bid up by the consumers to unprecedented heights; spot coal which had previously been selling at from $1.50 to $2 per ton was bid up to $5, $6, and, in exceptional cases, as high as $7.50 or more per ton. Then when the April, 1917, contract period arrived, contracts could be made only at prices ranging from $3 up to $5 and $6 per ton for the year's delivery.

This condition caused such a demoralization of the business and so much complaint that some action to regulate prices was considered essential by the National Administration.

LANE-PEABODY AGREEMENT.

In May, 1917, a committee, under the chairmanship of F. S. Peabody of Chicago, was appointed by the Council of National Defense, through Mr. Lane, to consider the whole question of bituminous coal. This committee, with the Secretary of the Interior, Mr. Lane, after numerous meetings and long negotiations with the operators throughout the country, announced on June 29 an agreement between the committee and the producers, fixing a tentative maximum price for bituminous coal throughout the country at $3 per net ton f. o. b. mines, to which was added 25 cents for selling commission to wholesalers.

This plan was based on the idea of fixing a maximum price, high enough to greatly stimulate production, with the expectation that the laws of supply and demand would, with ample production, operate to maintain fair and just prices for coal throughout the country.

THE LEVER ACT.

With the country plunged into the greatest war of history, it became evident that distinct power should be given the Administration to control efficiently war necessities, food and fuel, needed in ever-increasing amounts, not only by our own country but by our Allies, and for our armies in this country and abroad. With this in view, the Sixty-fifth Congress passed House bill No. 4961, generally known as the "Lever Act," entitled "An act to provide further for the national security and defense by encouraging the production, conserving the supply, and controlling the distribution of food products and fuels." It was approved August 10, 1917.

Section 5 of the Lever Act authorizes the licensing of "the importation, manufacture, storage, mining, or distribution of any necessities"; and section 25, "to fix the price of coal and coke, whenever and wherever sold, either by producer or dealer." It is further provided in this section "in fixing maximum prices for producers, the commission shall allow the cost of production, including the expense of operation, maintenance, depreciation, and depletion, and shall add thereto a just and reasonable profit." "In fixing such prices for dealers the commission shall allow the cost to the dealer and shall add thereto a just and reasonable sum for his profit in the transaction."

[The powers of the Federal Trade Commission as to coal were, with certain minor exceptions, transferred to the United States Fuel Administration by order of the President on July 3, 1918.]

THE "PRESIDENT'S PRICES."

On August 21, 1917, the President announced prices for bituminous coal throughout the United States specifying prices for run-of-mine, prepared sizes, and slack or screenings, by States and, in a few instances, by districts or by seams. These prices for run-of-mine coal varied from $1.90 to $3.25, and were, in general, a very great reduction from the prices fixed by the Lane-Peabody Commission.

These prices were based on figures on about 100,000,000 tons production, prepared by the Federal Trade Commission from the very meager data in its possession, generally costs from the larger and lower cost operations of each district.

THE FUEL ADMINISTRATION.

On August 23, 1917, Dr. Harry A. Garfield was appointed United States Fuel Administrator by the President, and to him was delegated the powers as to fuel conferred by said act on the President. On the same day, by presidential proclamation, prices were fixed on Pennsylvania anthracite coal. From this date until early in January, 1918, numerous revisions and adjustments of "the President's prices" were made by the Fuel Administrator, but no general verification or revision was attempted.

Early in January, the Engineers Committee was constituted, and to this committee was intrusted the making of a general review of costs and the submission to the United States Fuel Administrator of the results of careful studies of the costs of producing coal throughout the United States. Into this no question of quality entered. The Fuel Administration under the Lever Act, as interpreted for them, had no power to consider quality in price fixing.

The committee was not then, and never has been, authorized to fix prices on coal; the limit of its duties has been to study and report on methods of price fixing and to determine and furnish costs, leaving to the Fue Administrator the personal duty of determining the amount of margin to be allowed.

The committee's first work was a study of price-fixing methods which were, or might be, applicable to coal-producing conditions. In arriving at a logical and scientific plan for fixing the price of fuel the following methods were considered:

1. *Straight cost-plus method.*—The actual cost at each colliery plus a fixed sum or percentage of profit.
2. *Modified cost-plus method.*—The actual cost at each colliery plus a graduated profit, decreasing as costs increase.
3. *Average cost methods.*—Prices fixed on the average cost in each district.
4. *Pooling methods.*—All coal sold at the average cost of each district plus a profit, and the returns to each colliery adjusted through a clearing house at a price proportioned to its cost of production.

DISCUSSION OF PRICE-FIXING METHODS.

1. STRAIGHT COST-PLUS METHOD.

Advantages.—(*a*) All producers would receive the same profit, and no one would have an advantage over another in this respect.

(*b*) Apparently simple in plan and execution.

Disadvantages.—Impracticable of application, by reason of:

(*a*) Resultant multiplicity of prices, with grave disturbance of markets.

(*b*) Continual changing of prices, due to inevitable variations in each producer's costs.

(*c*) Instability of the industry, due to the natural disposition of consumers to purchase the lowest-price coal.

(*d*) Inefficiency in operation, always resulting from lack of incentive in cost-plus operations.

(*e*) Material reduction in output and reduction in quality, due to the natural tendency to mine the poorer and more expensive coal with a guaranteed profit, and to leave the better and cheaper coal in reserve to be mined on the return of normal conditions.

(*f*) Continual increase in all costs incident to extravagant methods encouraged by guaranteed profits.

(*g*) Labor unrest and constant demands for increases due to the knowledge of a guaranteed profit regardless of cost.

(*h*) Practical impossibility of arriving with technical accuracy at the costs of each separate operation.

(*i*) Impracticability of the Government's policing the mines and securing the same efficient operation and production attained by the individual producer under the stimulus of increased profits.

(*j*) Illogical, in that the better planned and managed operations are discouraged, as compared with poor and inefficiently managed properties.

2. MODIFIED COST-PLUS METHOD.

This is but a modification of the preceding, and the same discussion applies, modified only by the inclusion of a somewhat greater incentive to the better and more economical operations.

3. AVERAGE COST METHOD.

Advantages.—A minimum uniform price for each district or, if desired, for the entire country.

Disadvantages.—(*a*) The average cost is necessarily less than the cost of about half the total tonnage. Hence, a reasonable profit put on the average cost would not produce the necessary tonnage.

(*b*) The tonnage below and up to the average cost is actually produced by less than 30 per cent of the operators of the country. Hence, the great majority of the operators producing at above average cost would be put out of business by a price based on the average.

4. POOLING METHODS.

Pooling may be done on either cost-plus, modified cost-plus, or on the prices established by the United States Fuel Administration.

Advantages.—(*a*) A uniform price to consumers for sections and, if desired, for the entire country.

(*b*) A *present* lower price to consumers based on weighted average cost.

(*c*) A simplification of all present pooling arrangements, as all coal to each pool would have, or could be arranged to have, the same price.

(*d*) A return to the consideration of quality instead of cost, as, with all coal at the same price to consumers, the higher qualities would naturally be preferred.

Disadvantages of pooling cost-plus or modified cost-plus methods.—(*a*) Continual variation in pool prices, due to inevitable variations in producers' costs.

(*b*) Unfair and illogical, in that the better located and managed operations are made to pay tribute to the poor and badly managed ones.

(*c*) A general and considerable increase in cost inevitably resulting from any method involving guaranteed profits with a disregard of economy.

(*d*) A material reduction in output, due to lack of incentive and resulting inefficient methods, the employment of unnecessary labor, the mining of the more expensive and less desirable qualities of coal for the ultimate benefit of the mines, and the execution of development not immediately needed.

(*e*) A slacking of the efforts of employees, which is the usual result of a lack of incentive to the producer, with the resulting lack of interest.

(*f*) The installation of an unsound policy, tending to encourage the inefficient and discourage the efficient producer.

(*g*) The ever-present temptation to allow costs to increase with the hope of readjustment of prices.

(*h*) Dissatisfaction to both labor and to producers from the knowledge that other and less efficient operations have higher limits of price.

The disadvantage of pooling on the prices fixed by the United States Fuel Administration are the same as suggested above, without some of the special disadvantages of cost-plus methods.

Disadvantages of pooling in general.—(*a*) A very large capital required to handle such stupendous operations.

(*b*) Enormous and extended credits required to finance the producers.

(*c*) Lack of organization to handle this new business.

(*d*) Undesirability of creating such an organization with its army of additional employees at the present time.

(*e*) Inadvisability of putting a new and untried plan into operation at the present time.

(*f*) Impossibility of obtaining, with sufficient promptness, the costs necessary to fix pooling prices with the necessary accuracy.

(*g*) Interference with present established methods of handling coal, with serious risk of crippling its distribution and unnecessarily creating a shortage.

None of these suggested methods seemed to fill the peculiar conditions incident to price fixing of coal at the mines, and it devolved upon the Engineers Committee to develop some method better suited to the conditions of the problem.

THE PRICE-FIXING METHOD ADOPTED.

The study of the conditions indicated the necessity of finding a method of price fixing which would fill as nearly as practicable the following requirements:

1. Result in a price fair to the public.
2. Prevent excessive prices or profiteering.
3. Prevent a multiplicity of prices in any district.
4. Encourage legitimate production.
5. Discourage production from inefficient and unduly costly operations.
6. Insure to the producer "the cost of production, including the expense of operation, maintenance, depreciation, and depletion, with a just and reasonable profit," as required by the Lever Act.

In arriving at a method promising to accomplish these results as nearly as practicable, the following system was developed:

Costs for each district were obtained from the individual returns of each operator filed with the Federal Trade Commission. These were carefully studied and adjusted to a price-fixing basis, as later described. Then the percentage of each operator's output was found by dividing it by the total tonnage of the district and the costs both reported and adjusted arranged in order from the lowest to the highest with the percentages for each as above. An example of such a data sheet is as follows:

Company No.	Tonnage.	Per cent of total.	Costs.		Accumulated per cent.	
			Reported.	Adjusted.	Reported.	Adjusted.
1	116,041	14.5	$1.82	$1.78	14.5	14.5
2	39,662	5.0	1.98	1.93	19.5	19.5
3	69,912	8.7	1.98	1.98	28.2	28.2
4	165,362	20.6	2.07	1.99	48.8	48.8
5	90,649	11.3	2.09	2.08	60.1	60.1
6	33,347	4.2	2.20	2.39	64.3	? [illegible]8.8
7	196,751	24.5	2.27	2.26	88.8	84.6
8	89,661	11.2	2.29	2.39	100.0	100.0
Total	801,385	100.0				

Tables of this sort really give all the information needed, but are difficult to read and to understand, principally on account of the columnar form and the difficulty of carrying across by eye, and a graphic exposition of the figures is desirable. This was found by plotting on sheets 16 by 20 inches the lines of costs from the table, using costs as abeissæ and cumulative percentages as ordinates, so that the resulting diagram gives the cost for each operator, his percentage of the district total, and the relation of his costs and tonnage to those of all other operators in the district. The above example table is plotted on Chart No. 95.

These charts have the advantage of showing at a glance the relation between cost and tonnage for any district, and when the percentage of the total tonnage required is determined, the maximum cost for such percentage is automatically obtained. This percentage was determined from a study of conditions in each district and a line, christened the "bulk line," was placed on each chart, indicating the cost which must be allowed to produce the amount of tonnage considered indispensable. The United States Fuel Administrator after a careful study and review of the conditions personally added a margin necessary, in his judgment, to give a price to be fixed for the district only sufficiently high to bring out the necessary coal and leaving out of consideration the costs of operations above the "bulk-line."

Advantages of this system.—The method of fixing prices by the "bulk-line" principle recognizes the economic syllogism that "the price of any article necessary to a community will be fixed by the cost of producing that necessary portion of such article involving the greatest expense."

(*a*) This assures to all producers profits dependent upon their ability and exertions, only limited by the establishment of a reasonable price to the consumer.

(*b*) It does not unduly increase the price of coal to the consumer over the minimum price possible under other methods.

(*c*) It tends to encourage maximum production and necessary development by allowing to the producer the benefit of reduced costs due to greater production.

(*d*) It avoids bad feeling among the producers and among the workmen by allowing a fixed price in each district and not apparently showing favoritism to special producers.

(*e*) It tends to encourage the fit and discourage the unfit.

(*f*) The method is susceptible of refinement and extension, making it possible to eliminate undue profits to the producer and adjust prices from time to time to the ultimate advantage of the consumer.

Disadvantages of this system.—(*a*) Considerable profits to the lowest cost operators.

(*b*) A price for coal greater than one based on the average cost by the amount by which the "bulk line" exceeds such average.

This method appeared to be better suited to the conditions than any of the others suggested, and after a careful study by the United States Fuel Administrator, it was adopted.

COST DATA AVAILABLE.

The Federal Commission had, by authority of the act of Congress creating the commission, the power to investigate costs, and to require, under penalty, reports of costs of operation. Under this authority, the commission sent out to each coal producer listed in the United States, blanks requiring a rather complete and detailed statement of costs of operation and the realization obtained from the sale of this product.

These reports were generally available for the months of August and September, 1917, at the time the revision of prices was started, and reports for these two months, studied in connection with later reports, were generally used as a basis of costs for the first studies. It further developed that these two months were, in most instances, fairly representative, as to output, of the average of the year.

Charts Nos. 103 to 136 for the year 1918 show not only the accuracy of the prices fixed from the deductions made from the charts of August and September, 1917, but also the soundness of the assumption that a 45-cent allowance, reduced May 24, 1918, to 35 cents, would generally fairly compensate for the labor advance of November 1, 1917. The charts of costs for 1918 include the increased labor cost, and this must be considered in comparing these with the 1917 charts, Nos. 1 to 100, corresponding lines from which are plotted in light lines on the 1918 charts for comparison.

ANALYSIS AND ADJUSTMENT OF COST SHEETS.

Without desiring to impugn either the honesty or the accuracy of the cost sheets as presented, it was found essential to study and adjust them for use as a basis of scientific and accurate cost finding. Besides correcting slips and palpable mathematical errors, a considerable amount of revision was necessary. Many, especially of the small operators, were inexperienced in bookkeeping and submitted cost sheets which, while accurate in totals, were grievously mixed in details.

Supplies.—The item of supplies was found to vary so widely in the same mines in different months that the returns for single months were practically abandoned, and the figures were replaced by averages from all reports available, resulting in increases or deductions from the monthly costs as reported.

Reserves.—The item of maintenance was frequently misunderstood, in some instances all supplies and much labor being charged to this account; in others a fixed sum, and in still other cases, nothing at all was charged.

Depreciation was often put in as a guess; in some cases it was frankly stated that this seemed a good time to charge off improvements, and such were charged to the limit, and beyond.

Depletion of lands was also an item which appeared greatly to trouble some of the accountants. While generally understood, many very wild guesses, even up to the market price of the product, were found; also, many instances of depletion charges for lands operated on royalty or lease and not the property of the operator.

Contingent funds noted on the blank were generally omitted, but in a few cases, especially when the need of such funds had recently been felt, most ample allowances were made. After being considered, it was decided to apply in each district amounts obtained by studying the claims of the better operators of such district, after obtaining, from the best available sources, reliable figures as to the cost of lands and amount and value of improvements characteristic of the district.

The question of contingent reserves is a serious one. From a strict cost-accounting standpoint, no cost can be permitted until incurred. Nevertheless, such reserves are essential to an industry involving the great risk incident to coal mining, and with the full knowledge that such reserves are used only for major accidents or calamities, and that ordinary losses regularly incurred are charged to the costs of operation, it was decided to include a small amount for contingent reserve in the general allowance.

Salaries.—Executive and even superintendent's salaries were frequently omitted. In many cases of personal ownership, undoubtedly none were paid. It was considered only just to add to such returns reasonable allowances for salaries to place such reports on a parity with the majority of the operations which paid for such necessary service. On the other hand, occasional instances were found of reported salaries so excessive as to require adjustment downward to a reasonable parity with the general practice of the district.

The following sliding scale of salaries, adjusted within broad limits to the monthly tonnage of an operation, was finally devised. Reported salaries between these limits were accepted as correct. Those salaries missing or below the minimum were raised to the minimum, and those above the maximum were lowered to the maximum.

Salary memorandum used by the committee.

Monthly tonnage.	Per month.	Per ton per month.
		Cents.
1,000 and under	$150 to $250	15 up.
2,000	160 to 400	8 to 20
3,000	180 to 450	6 to 15
4,000	200 to 480	5 to 12
5,000	200 to 500	4 to 10
7,500	250 to 600	3½ to 8
10,000	300 to 700	3 to 7
20,000	400 to 800	2 to 4
50,000	500 to 1,500	1 to 3
75,000	750 to 2,250	1 to 3
100,000	1,000 to 2,500	1 to 2½
Over 100,000	....	½ to 2

Special charges.—Special charges were generally treated in detail, often spread over a reasonable time rather than allowed in a single month. In treating these a careful study of all reports available was made.

Special records.—The Federal Trade Commission had required special explanations of all charges out of the ordinary, and all these records were available and were carefully studied and had great influence in deciding doubtful points.

Outside profits.—The profits from farms, dwellings, or stores are not properly mining profits, and accounts of these should be kept separate from mining expense. Where it is found that such accounts are separated, no deduction for such profits should be made, but where dwellings, particularly, are so intimately connected with the mining that no separation is possible, it is proper to include their operation with mining accounts.

Fuel for power.—In general, charges for fuel for colliery power were allowed, and the tonnage divisor was made to include such fuel. In the opinion of the committee it would, however, be advisable to eliminate colliery fuel from both sides of the account, and merely to keep a record of the amount used. By this method the tonnage divisor represents the amount shipped and sold and is susceptible of accurate determination, while the fuel used is approximated, or even guessed at, too often to make the general records containing this item reliable.

Other items requiring occasional adjustment were the inclusion of washing costs, for which an extra charge is allowed, in the mining cost, and the inclusion of labor and supplies used in coking operations conducted by the same operators. In a few instances, the coke tonnage, or a mixed tonnage of coal and coke, was reported and used as a divisor to obtain costs per ton, resulting, of course, in a notably excessive cost.

In general, each and every cost sheet was studied carefully by at least one member of the committee, all adjustments were considered by at least two, and only such adjustments were made as were warranted by the conditions and the necessity of placing all costs on the same basis, so as to find a just basis of cost for fixing the prices for each district.

Reporting costs.—The great mass of cost figures obtained from the above analysis of the cost of operators mining over 95 per cent of the entire production of bituminous coal in the United States were merely confusing and of but little practical value when presented in tables of figures.

The charts, the construction of which was described above, show these costs graphically, so that they may be studied and compared with a minimum of effort.

A full set of the finished charts covering August and September, 1917, for both reported and adjusted costs, Nos. 1 to 102, and the year 1918 reported costs only with 1917 lines added for comparison, Nos. 103 to 136, are attached and made a part of this report. These by their tables and legends show the dates and districts and also the tonnage and division of sizes covered by each one.

The light lines show reported and the heavy lines adjusted costs for Charts Nos. 1 to 102, while for the charts for the year of 1918, Nos. 103 to 136, the heavy line shows reported average costs for the year 1918, and the light lines reported costs from the 1917 charts for comparison. The percentage of output up to or between any limits of cost can be determined by simple inspection.

The "bulk line" or line of indispensable coal which must be assured of a minimum profit, after study of the conditions and necessities of any district, can be properly located, and from this a minimum profit necessary for the district can be determined.

ADJUSTING THE "BULK LINE."

The "bulk line" is a matter requiring very careful study. Its location must be such as to conserve and encourage all necessary operations and thus assure the maximum coal supply from each district.

It is almost invariably found that at the high-cost end of the diagram are collected most of the doubtful enterprises. These include mines which have failed under normal competitive conditions and have been reopened under the stimulus of the high prices preceding Government control; mines abandoned as exhausted and reopened for the few remaining pillars; new enterprises in the developnent stage; mines opened on beds so thin or of such poor quality that they could not operate under normal conditions; small mines on outcrop coal, often of poor quality, which have neither capital nor equipment for economical working; mines which have encountered faults or in which the coal has thinned or split, or the quality has so deteriorated as to prevent working at a reasonable cost; and, not the least of this group, mines so badly managed as to show unwarrantable costs of operation.

All these classes of mines are unjustifiable under war conditions. They use labor inefficiently. Often their records show less than half the tonnage per employee usually obtained in their district, and their elimination is an economical advantage to a district in releasing labor to more efficient mines.

In this high-cost group occasionally are found mines which have a coal of unusually high quality or fitted for special use, for which a market at prices above those of the district has always existed. Such mines, on proving their special conditions, may receive consideration for special prices sufficient to allow a fair profit on their higher costs.

After a study of all conditions, the "bulk line" is located as far as possible to exclude the classes of operations above mentioned and to include all mines operating economically and efficiently. The margin above the "bulk line" is sufficient to allow all but a very small percentage of the tonnage to be produced without actual loss, but with less than the minimum profit applied to all mines up to the "bulk line."

The charts have the further advantage that they show all the costs of any district without divulging the costs of any operation, yet by a very simple system of confidential keys the position of any separate operation can be almost instantly found and its cost sheets located, and that almost any desired information as to costs or tonnage, averages, totals within desired limits, margins, excessive and subnormal costs with the tonnage involved, and other items of information often required can be obtained very rapidly and with a minimum expenditure of time or labor. On one occasion two members of the committee calculated in a single evening the weighted average costs, both reported and adjusted, for over three-fourths of the entire bituminous coal output of the country.

DISTRICTING.

It is inevitable that mines should show wide variations in cost, due to the varying thickness and character of the beds worked, and to apply a single price to all the mines of a State would result in either allowing an unreasonable profit to those working the better and thicker beds, or absolutely put out of business the higher-cost districts.

Where an area examined shows wide variations of cost, it becomes necessary to employ some plan of separation and to segregate into groups those mines operating under similar conditions. Such districting may be based on difference in beds, on thickness of coal, or by geographical and geological districts.

Districting by beds is only occasionally practicable, for the following reasons:

(*a*) Variation in thickness and quality in the same bed.
(*b*) Difficulty of identification of beds.
(*c*) Splitting of beds, changing one thick bed to two or more thin ones.
(*d*) Changes in mining conditions in the same bed, making radical differences in cost of mining.

Districting by thickness of beds seems at first glance the most logical method, but it has the fatal objection that, as nearly all beds become thin in places, two or more costs will be found in contiguous mines and often in the same mine. Further, this districting leads to gross profiteering, by attempting to classify mines by the thinnest coal, not by the average.

The terms "thick" and "thin" beds are particularly dangerous, as what would be considered thick in one region may be classed as thin in another, and the reverse. It is therefore manifestly undesirable for the United States Fuel Administration officially to designate any particular thickness as the dividing line between thick and thin.

Districting geographically has the great advantage of making divisions susceptible of accurate description and eliminating all questions as to the proper price applicable to any colliery. It generally puts together mines having the same conditions and normally competing, avoids varying prices for coal of the same quality and character, and simplifies distribution and marketing. The difficulties in applying this method are greatest in fields where numerous beds of varying thickness and character are worked, resulting in considerable variations in price. It is also frequently difficult to properly classify operations near the borders of adjoining districts, and geographical districts are hence necessarily subject to some adjustment of boundaries.

Further, in designating districts, labor conditions are necessarily carefully considered. Neither miners nor operators wish to have the scale of wages changed in any mine by the throwing of such mine from one wage district to another, and before deciding on the boundaries of districts, it has been found essential to obtain the wage scale and the boundaries of wage-scale districts. Further, it is found that in making up the wage scales some very accurate districting has been done, and maps showing these wage districts are of great assistance in the final determination of proper boundaries.

It is the practice of the committee to classify mines under study, first by counties or fields, and then to separate or combine them, as the case may be, to obtain districts containing, as far as practicable, mines operating under the same general conditions.

Diagrams 101 and 102 show the result of districting in an important territory producing about 75,000,000 tons of coal per year. Diagram No. 101 shows the costs for the entire area, and the very wide variations in cost due to different mining conditions are apparent. Diagram No. 102 shows the costs in the three districts finally segregated. These all permit price fixing without giving excessive profit or putting the high-cost districts out of business, thus assuring the mining of the required tonnage of coal.

It will be noted in the three-district diagram that the low cost of No. 1 corresponds with the high cost of No. 2, and the low of No. 2 with the high of No. 3. If prices had been fixed on Diagram No. 101 for the entire State, the "bulk line" would have been placed at about $1.90. This would have put the whole of District No. 1 and 36 per cent of District No. 2, or a production of about 500,000 tons per month, above the bulk line, giving these regions an insufficient margin, and checking production, if not stopping it; at the same time, it would have given to District No. 3, producing 5,700,000 tons per month, 30 cents per ton, or over $1,700,000 per month, unnecessary margin. Similar conditions throughout the country have been handled in this manner.

It will also be noted that the variation between high and low costs increases with the higher-cost districts. The angle of slope of the cost line increases from No. 3 to No. 1. This results in a somewhat greater margin between the average cost and the "bulk line," which is logical and necessary. The high-cost mines, having greater expenses, need a larger "margin" to attain the same percentage of profit.

PRICE FIXING.

The "bulk line" of the chart, with the "margin" added by the United States Fuel Administrator, determines the realization for a district, but it does not completely fix prices. The price for run-of-mine is usually fixed at the realization price, but where screening is desirable it is necessary to fix a spread of prices, so that the operator receives as much as 1 or 2 cents more for the screened product than for run-of-mine.

The tonnage of run-of-mine, prepared, and screenings for each district is obtained from the cost sheets; then the average division of the screened coal in percentage is computed, and from this margins are determined which will permit screening but not too greatly stimulate the practice. For instance, if a coal will produce 55 per cent prepared, and 45 per cent screenings, an equal margin above and below the run-of-mine price would be indicated; but a coal which would produce 30 per cent prepared and 70 per cent screenings would need a much larger margin for prepared above run-of-mine, and a very small margin below for screenings.

If the "spread" is not correctly figured, the result is to make some combination unduly profitable, with the result that only that combination is found to be made. In some instances, run-of-mine from particular collieries shows a few cents margin over screened coal, and these collieries will produce run-of-mine exclusively. In other cases, prepared and screenings are more profitable, with the reverse result.

UNUSUAL SIZES.

In many parts of the country, it was found that special sizes were customarily made. In Illinois, for instance, a considerable amount of coal is sized, about in accordance with anthracite practice, into egg, stove, nut, pea, and buckwheat, and in certain States so-called "modified run-of-mine," passing through 2, 3, 4, 5, 6, and 8 inch bars, is a standard product. These specially prepared and modified run-of-mine sizes cost the operators something extra, and will only be made if the prices received yield a profit over the regular procedure. The Fuel Administration has met this condition by allowing special prices for specially sized coal and for modified run-of-mine sizes, but all such prices are so calculated as to allow only enough profit on any combination to permit its existence and not enough to encourage the forcing of such size on consumers.

In price fixing of this sort, it is essential to obtain, from several independent and reliable sources, the percentages of the various sizes produced by screening from each coal likely to be used in this way, and carefully balance the costs, losses, and percentages of each size produced to arrive at a proper price.

It is also necessary to evolve methods of preventing profiteering on special prices. For instance, it was found that after making sizes down to buckwheat from bituminous coal, in some cases the fine screenings, far below the standard mesh of the district, were run into the regular run-of-mine and sold at the run-of-mine price. This was handled by an order allowing a maximum of 30 cents below *screenings price* for any mixture of the fine coal below ½ inch mesh with any other coal. This is easy to police, as the mere report of sizes below the standard screenings mesh of any district involves the report of special fine screenings or "carbon" at the price 30 cents below screenings, and if such is not found, it is assumed to be mixed with commercial sizes.

MARGIN.

The difference between the mine costs, arrived at as above described, and the price is the "margin." This is far from being the profit, as many items of expense necessarily incurred are not included in the mine price, such are: (*a*) Selling expense; (*b*) improvements; (*c*) developments to increase output; (*d*) excess of capital expenditures over normal costs; (*e*) contracts at lower than "Government prices;" (*f*) interest on bonded indebtedness; (*g*) income taxes; (*h*) excess-profit taxes; (*i*) profit on investment.

None of these items is properly included in "cost of production" under normal conditions, but in a war situation it is practically impossible to obtain money to capitalize expenditures for excess improvements and developments would normally be capitalized and which properly included in the permitted depreciation, particularly as all such expenditures are made at from two to three times their normal costs, it is a serious question whether the "margin" allowed should not be made large enough to include at least this class of expenditures.

RESULTS OF PRICE FIXING.

As our Government has been forced into this untried realm of price control by war conditions, it may be interesting to know the results. Diagram No. 100 shows these, in general, before the labor increase of November, 1917, compensated for by the 45-cent general advance in coal prices above referred to, giving the average costs, "bulk lines," and prices fixed for practically all districts in the country as of August and September, 1917, and covers about 95 per cent of the total output of bituminous coal for the period stated.

The costs for each district in the proportion of its output to the total tonnage studied are shown in heavy lines, the "bulk lines" are shown by medium lines, and the prices fixed are indicated by light lines. The diagram also shows the weighted average costs, "bulk lines," and prices fixed for the tonnage included, and effectively disposes of the widely circulated aspersions of profiteering, of which industry has been so freely accused by people having no knowledge of the facts or willfully misrepresenting them.

Diagram No. 131 shows the same data for the principal districts for the full year 1918, giving, however, only reported costs and prices fixed, the prices having been fixed on the August-September, 1917, data, and changed only by the 45 cents allowed November 1, 1917, to compensate for the labor increase of that date, reduced May 24, 1918, to 35 cents in consideration of equal car distribution ordered at that time.

The weighted average margin between costs and prices for practically the entire bituminous coal production of the country was but 45.6 cents, and between the "bulk line," which represents the higher-cost necessary coal and the price fixed by the Fuel Administrator, was but 26 cents.

Summary showing reported and adjusted costs, prices fixed, tonnage, and weighted averages for all principal charts, Aug. 12, 1918.

No.	State or district.	Month.	Monthly tons.	Average costs.		Price fixed.	Tons above price fixed.	Per cent above price fixed.
				Reported.	Adjusted.			
1	Colorado lignite	August	150,000	$1.80	$1.75	$2.35	1,500	1.0
2	do	September	140,000	1.89	1.81	2.35	17,950	12.7
3	Colorado domestic	August	475,000	2.03	1.98	2.55	28,500	6.0
4	do	September	450,000	2.06	1.95	2.55	45,000	10.0
5	Colorado trinidad	August	340,000	1.88	1.80	2.19	6,800	2.0
6	do	September	300,000	1.88	1.80	2.19	8,200	3.0
7	Iowa, Des Moines	August	410,000	2.14	2.16	2.80	14,400	4.0
		September	410,000	2.14	2.16	2.80	14,400	4.0
8	Iowa, Appanoose	August	140,000	2.42	2.44	3.00	1,700	1.3
		September	140,000	2.42	2.44	3.00	1,700	1.3
9	Central Pennsylvania	August	4,120,000	1.93	1.96	2.60	123,600	3.0
10	do	September	4,500,000	1.98	2.00	2.60	198,000	4.4
11	Montana, Wyoming, Utah	August	950,000	1.89	1.89	2.60	9,500	1.0
		September	950,000	1.89	1.89	2.60	9,500	1.0
12	Upper Potomac	August	690,000	1.75	1.81	2.40	24,200	3.5
13	do	September	500,000	1.94	1.95	2.40	30,000	6.0
14	West Virginia, Tug River	August	230,000	1.83	1.76	2.40	6,900	3.0
15	do	September	230,000	1.83	1.80	2.40	13,200	5.7
16	Virginia, Upper Clinch	August	30,000	2.07	2.10	2.50	900	3.0
17	do	September	25,000	2.24	2.15	2.50	1,100	4.4
18	West Virignia, Preston	August	55,000	1.87	1.89	2.40	5,000	9.0
19	do	September	50,000	1.97	1.91	2.40	4,600	9.3
20	Pennsylvania, southwestern	August	7,450,000	1.54	1.57	2.00	74,500	1.0
21	do	September	7,000,000	1.60	1.61	2.00	91,000	1.3
22	Ohio, District No. 8	August	1,230,000	1.49	1.49	2.00		
23	do	September	1,000,000	1.51	1.53	2.00		
26	Illinois, District No. 1	August	340,000	2.26	2.24	2.75	1,700	.5
27	do	September	280,000	2.31	2.29	2.75	21,000	7.5
28	Illinois, Districts Nos. 2 and 5	August	425,000	1.86	1.84	2.40	3,200	.7
29	do	September	390,000	1.86	1.82	2.40		
30	Illinois, Districts 3, 4, and 6	August	5,700,000	1.47	1.48	2.00	19,000	.3
31	do	September	5,350,000	1.50	1.53	2.00	69,500	1.3
32	Oklahoma and Arkansas	August	305,000	2.43	2.43	3.30	4,600	1.5
33	do	September	210,000	2.57	2.58	3.30	6,000	2.5
34	Oklahoma, McAlester District	August	80,000	2.94	3.02	3.95		
35	do	September	60,000	3.17	3.29	3.95	1,800	3.0
38	West Virginia, Pocahontas	August	1,690,000	1.38	1.30	2.00	30,400	1.8
39	do	September	1,560,000	1.42	1.33	2.00		
40	New Mexico, Raton District	August	261,000	1.62	1.73	2.35		
41	do	September	261,000	1.49	1.73	2.35		
42	East Kentucky and East Tennessee	November	900,000	2.02	1.91	2.65	18,000	2.0
		November	900,000	2.02	1.91	2.65	18,000	2.0
43	Kentucky, Tennessee, and Virginia	November	1,135,000	1.54	1.60	2.20	3,400	.3
		November	1,135,000	1.54	1.60	2.20	3,400	.3
44	West Virginia, District No. 10	August	370,000	1.65	1.70	2.30		
45	do	September	360,000	1.73	1.75	2.30	2,700	.8
46	West Virginia, Logan District	August	885,000	1.61	1.65	2.15	6,200	.7
47	do	September	800,000	1.70	1.65	2.15		
48	West Virginia, Kanawha District	August	950,000	1.56	1.57	2.25	4,800	.5
49	do	September	830,000	1.61	1.63	2.25	24,900	3.0
50	West Virginia, New River	August	1,035,000	1.73	1.72	2.35	24,700	2.4
51	do	September	1,150,000	1.76	1.79	2.35	25,300	2.2
52	West Virginia, Thacker and Kenova	August	300,000	1.62	1.65	2.30		
53	do	September	270,000	1.57	1.60	2.30		
54	West Virginia, Fairmont	August	985,000	1.54	1.59	2.15	4,900	.5
55	do	September	910,000	1.58	1.60	2.15		

Summary showing reported and adjusted costs, prices fixed, tonnage, and weighted averages for all principal charts, Aug. 12, 1918—Continued.

No.	State or district.	Month.	Monthly tons.	Average costs.		Price fixed.	Tons above price fixed.	Per cent above price fixed.
				Reported.	Adjusted.			
57	Kansas, Cherokee, and Crawford	August	475,000	2.16	2.21	2.75	3,561	.7
		September	475,000	2.16	2.21	2.75	3,561	.7
58	Missouri, District No. 1	August	240,000	2.03	2.09	2.75	2,400	1.0
		September	240,000	2.03	2.09	2.75	2,400	1.0
59	Missouri, District No. 2	August	130,000	2.47	2.47	3.20	900	.7
		September	130,000	2.47	2.47	3.20	900	.7
63	Indiana	August	1,770,000	1.58	1.61	2.00	35,540	2.0
		September	1,770,000	1.58	1.61	2.00	35,540	2.0
66	Ohio and West Virginia—Pomeroy	August	94,000	2.15	1.92	2.45	400	.4
		September	94,000	2.15	1.92	2.45	400	.4
68	North Dakota lignite	August	40,000	1.47	1.55	2.10	1,608	4.0
	South of twelfth standard parallel	September	40,000	1.47	1.55	2.10	1,608	4.0
69	North Dakota lignite	August	17,000	2.38	2.17	2.65		
	North twelfth standard parallel	September	17,000	2.38	2.17	2.65		
70	Kentucky, western	August	658,000	1.43	1.46	2.00	1,645	.3
		September	658,000	1.43	1.46	2.00	1,645	.3
71	Texas lignite	August	80,000	.83	1.03	1.65		
		September	80,000	.83	1.03	1.65		
72	Texas, District No. 1, bituminous	August	12,000	3.38	3.35	4.35		
		September	12,000	3.38	3.35	4.35		
73	Texas, District No. 2, bituminous	August	73,000	2.62	2.71	3.50		
		September	73,000	2.62	2.71	3.50		
74	Ohio, Districts Nos. 2 and 7	August	165,000	2.38	2.30	3.10	1,236	.7
		September	165,000	2.38	2.30	3.10	1,236	.7
75	Ohio, District No. 5	August	360,000	1.61	1.65	2.35	1,800	.5
		September	360,000	1.61	1.65	2.35	1,800	.5
	Ohio, District No. 3	August	591,000	1.61	1.65	2.20	14,764	2.5
		September	591,000	1.61	1.65	2.20	14,764	2.5
76	Ohio, Districts Nos. 4 and 6	August	296,000	2.11	2.02	2.60	5,920	2.0
		September	296,000	2.11	2.02	2.60	5,920	2.0
77	Alabama, District No. 1	August	380,000	1.47	1.48	2.10		
		September	380,000	1.47	1.48	2.10		
78	Alabama, District No. 2	August	185,000	2.49	2.47	3.10	12,900	7.0
		September	185,000	2.49	2.47	3.10	12,900	7.0
79	Alabama, District No. 3	August	790,000	1.87	1.86	2.50	3,200	.4
		September	790,000	1.87	1.86	2.50	3,200	.4
80	Alabama, District No. 4	August	90,000	1.86	1.96	2.50		
		September	90,000	1.86	1.96	2.50		
	Totals and weighted averages		74,714,000	1.696	1.706	2.262	1,197,400	1.603
	Less reduction of May 24, 1918					.10		
			74,714,000	1.696	1.706	2.162	1,197,400	1.603

When prices were fixed on the August–September, 1917, costs, for the the year 1918 the margin between costs and fixed prices was —— cents and costs show an average increse of —— cents over the 1917 figures, for which an average of a little less than 40 cents was allowed.

The two sets of observations—August–September, 1917, and the year 1918—thus fully justify the prices fixed on the earlier data and confirm the justice and accuracy of the estimate of the increased cost due to the labor advance of November 1, 1917.

As it is known that the capital invested per ton of yearly output in bituminous mines ranges from $2 to nearly $8, interest on which is included with other items in the "margin" not included in the charted costs, it is evident that taking the industry as a whole no excessive price allowances were given. If prices had been fixed at a point high enough to even cover the highest costs reported in each district, the result would have been to add over a billion dollars to the price paid for coal, with probable labor disturbances, in an effort to obtain some of the abnormal profits which would have gone to the great majority of the tonnage, so serious as to have probably decreased rather than increased the tonnage, which was in fact ample for all the needs of the country.

The prices fixed from this complete investigation of costs have shown in many cases a remarkable compliance with economic laws. For instance, in Illinois the cost of coal from the different price districts delivered in Chicago was found to be practically identical, showing that the mining of the higher-cost coal is due to its proximity to the principal market and the lower resulting transportation costs. High-grade coal shipped by lake and rail to Minneapolis was found to cost precisely the same per heat unit as a lower-grade coal shipped a much less distance all rail.

SPECIAL PRICES.

The price-fixing program adopted is expected to take care of all normal mining conditions and to permit the operation, with a reasonable profit, of all mines necessary to the country under war conditions. There are cases however, of old-established mines which are producing coal of a quality specially suited to certain processes or requirements, which coal, while produced at a cost materially above the regional "bulk line," is necessary and has always commanded a special price. In these cases a higher price, sufficient to permit operation, is usually granted. Also, in some cases, groups of small mines, not required to report, are found to be serving certain communities at prices below other coal available, considering the transportation charges, but with costs above the regional "bulk line." These also receive special prices.

Differentials on cannel and smithing coal were also recommended. In June the following statement as to cannel coal was made:

> We have investigated fully and find that cannel coal as far back as 1912 has sold at $1 per ton or more over ruling price for bituminous coal, and as it is in considerable demand in the West to replace anthracite we believe that the usual differential should be maintained.

In July, 1918, the following recommendation and definition of smithing coal was made:

> We suggest an allowance for specially selected and prepared smithing coal of 50 cents per ton over the prepared coal price of the region where said smithing coal is produced and a further allowance of 50 cents per ton additional for such smithing coal when shipped in box cars.
>
> All producers of specially selected and prepared smithing coal shall be required to secure a license from the United States Fuel Administration for selling or shipping such coal.
>
> *Specifications.*—Smithing coal shall be specially selected and prepared.
>
> *Analysis.*—Volatile, not over 25 per cent; ash, not over 9 per cent; sulphur, not over 1.3 per cent.
>
> *Physical properties.*—Coal must be a good coking coal, capable of producing a large, strong arch of coke on the forge, and capable of producing and maintaining a welding temperature in iron or steel without injury or damage to the welding surface of the metal, and the ash of which does not fuse at forge temperatures.

In general, it is the policy of the Fuel Administration to encourage the operators to produce all coal needed and to place restrictions only on coal mined under conditions notably uneconomic.

EFFECT OF SHORT TIME.

While it is a syllogism in mining regions that "short time means increased costs," but little actual information as to the quantitative effect of lost time on the cost of coal mining is available. In the discussion as to the advantages or disadvantages of an even car supply to all mines, as compared with 100 per cent supply to some and the remainder to the others, it devolved upon the committee to determine. at least approximately, the effect of lost time on the cost of mining.

Fortunately, reports were available from 73 operators in the New River District of West Vriginia, which had been made out and submitted by an eminent firm of expert accountants for each month of the year 1917. Each of these was carefully analyzed, and the percentage increase of cost for each of the 830 observations thus obtained was plotted; weighted averages were then taken at each 2.5 per cent from 70 to 100 per cent working time, and for each 5 per cent below 80 per cent. The result of this study is submitted on Plate 61 which has been checked by numerous observations from practically every field and has been found, within reasonable limits, to be correct. This diagram can be and has been used in reducing to normal cost the reported costs of collieries shut down during parts of months.

ANTHRACITE PRICES.

Anthracite prices as fixed by the President August 23, 1917, with an adjustment for the labor increase of December 1, 1917, were the subject of an intensive study by the committee immediately after the first charting of bituminous costs was completed.

The results of this are shown on Plates Nos. 81 to 91, inclusive, and the verification for the 11 months December, 1917, to October, 1918, inclusive, on Plates Nos. 115 to 121. A technical paper giving the methods adopted and the results of this analysis was read by Mr. Norris at the New York meeting of the American Institute of Mining Engineers, February, 1919, and is published in their transactions. The following is abstracted from this paper..

ADJUSTMENTS.

> The adjustments of cost from a reported to a price-fixing basis, as described for the bituminous methods, were applied but showed only minor adjustments as necessary.
>
> The great spread in anthracite prices on the varying sizes, which for the 6-month period under review ranged in average from $5.244 for nut to $2.074 for barley coal, makes the question of the percentage of sizes produced at the different collieries a vital one. The realization with the same prices for each size must be within very wide limits, when it is considered that the percentage of prepared coal reported from different collieries varied from over 80 per cent to below 30 per cent for fresh-mined coal. Hence, as the spread in prices for the various sizes must be predicated on some percentage, it is essential to find some method of adjustment to allow for this variation. The logical method of adjustment is to calculate actual costs to costs as of the standard percentage of sizes, so that the margin between the adjusted costs and the average realization shall be the actual margin for each colliery between its actual costs and actual realization due to its particular percentage of sizes. As a base for realization the actual percentage of sizes for fresh-mined coal for the 6-month period was adopted. This percentage is given in Table 1.

TABLE 1.—*Percentage of sizes of fresh-mined coal.*

Size of coal.	Mesh, in inches. Through. Round.		Mesh, in inches. Over. Round.		Percentage of sizes. Fresh-mined.	Percentage of sizes. Washery.	Percentage of sizes. Fresh-mined and washery.
Broken		$4\frac{1}{2}$	$3\frac{3}{8}$	$3\frac{1}{4}$	6.8	0.4	6.2
Egg	$3\frac{3}{8}$	$3\frac{1}{4}$	$2\frac{5}{16}$	$2\frac{1}{4}$	14.6	1.2	13.5
Stove	$2\frac{5}{16}$	$2\frac{1}{4}$	$1\frac{5}{8}$	$1\frac{1}{2}$	19.6	2.3	18.2
Nut	$1\frac{5}{8}$	$1\frac{1}{2}$		$\frac{3}{4}$	24.7	10.1	23.5
Pea		$\frac{3}{4}$		$\frac{1}{2}$	9.1	10.0	9.2
Buckwheat		$\frac{1}{2}$	$\frac{5}{16}$	$\frac{1}{4}$	11.6	21.4	12.4
Rice	$\frac{5}{16}$	$\frac{1}{4}$	$\frac{3}{16}$	$\frac{5}{32}$	3.2	14.9	4.2
Barley	$\frac{3}{16}$	$\frac{5}{32}$	$\frac{3}{32}$	$\frac{1}{16}$	4.9	27.5	6.8
Boiler	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{3}{32}$	$\frac{1}{16}$	3.9	8.8	4.3
Screenings	$\frac{3}{32}$	$\frac{1}{16}$			1.6	3.4	1.7

For adjustment as a base for fixing a spread of prices the percentages used were, taken at even figures, prepared 65 per cent, pea 9 per cent, buckwheat 12 per cent, and smaller 14 per cent.

The adjustment finally arrived at after long study was tested on actual reports from collieries having percentages that varied from over 80 per cent to under 30 per cent prepared coal and was found to be correct within a maximum variation of less than 1½ per cent. It was as follows:

For each 1 per cent variation.	Above standard, per cent deduction.	Below standard, per cent addition.
Prepared	1.20	1.20
Pea	.85	.85
Buckwheat	.75	.75
Smaller	.50	.50

As examples of the working of this adjustment with prices assumed at about the average for the 6 months and taking mines well away from average percentage of sizes.

Size.	Base sizes.	Base price.	Realization.	Mine A sizes.	Correction.	Actual realization.	Mine B sizes.	Correction.	Realization.
	Per cent.			*Per cent.*	*Per cent.*		*Per cent.*	*Per cent.*	
Prepared	65	$5.10	$3.315	73.1	−9.72	$3.730	55.1	+11.880	$2.810
Pea	9	3.70	.333	6.4	+2.21	.237	15.3	− 5.355	.566
Buckwheat	12	3.20	.384	10.4	+1.20	.333	13.7	− 1.275	.438
Smaller	14	2.20	.308	10.1	+1.95	.222	15.9	− .950	.350
Total	100	....	4.340	100.0	−4.36	4.522	100.0	+ 4.30	4.164

Assume cost for each mine	$4.000		$4.000
Actual margin	.522		.164
Standard realization	4.340		4.340
Calculated cost as of standard per cent sizes $4 × 0.9564%=	3.826	$4 × 104.30%=	4.172
Calculated margin	.514		.168

The correction for mine A is then −4.36 per cent and the adjusted cost $3.826, showing 51.4 cents margin on the $4.34 standard realization against 52.2 cents actual margin. Similarly, for mine B, the correction is +4.30 per cent, giving an adjusted cost of $4.172 and a margin of 16.8 cents as compared with the actual margin of 16.4 cents. Thus the adjusted costs on the chart bear a true relation to the realization received from a scale of prices for the various sizes based on the standard or average percentage of sizes adopted as a base, regardless of the actual percentage of sizes produced by each operation, and prices can be fixed from the chart line of adjusted costs which will result in giving each mine its intended margin. The correction, of course, is an allocation based on realization from the different sizes and could be made more accurately by taking into account each size produced, but at the cost of more time than was available for the work. With a material variation in price, different factors of correction should be calculated.

ROYALTIES.

A large percentage of the anthracite coal is owned in fee by operators, who also lease tracts contiguous to their fee holdings. As all report royalties on the basis of tonnage produced, the general average 15.5 cents per ton reported is misleading. The actual average royalty reported by operators mining generally from leased lands was 33.25 cents, and by those generally mining from fee lands, 5.5 cents. As relatively few operators mine exclusively from either class of lands, no data is available to show the actual average royalties paid, but it is believed that the present average would be approximately 40 cents per ton.

A few leases, notably those made by the trustees of the Girard estate, owned by the city of Philadelphia, base the royalty payments on a percentage of the sale price of the coal at the mines instead of requiring fixed royalties. This percentage varies from 15 per cent to as high as 28 per cent of the price. As the labor war bonuses materially add to the sale price, these have resulted in excessive royalties and serious embarrassment to the operators, who were not allowed to increase the price of coal sufficiently to even fully absorb this additional labor cost and by whom the extra royalties must be paid out of already narrow margins. Many of the lessors have patriotically foregone the extra royalties due under these sliding scales, and as it is certainly improper that the public should be asked to pay these additional royalties, not contemplated in the original contract though enforceable at law, the United States Fuel Administrator has expressed himself as unwilling to consider such excess payments in any fixing of anthracite prices.

COST CHARTS.

Cost charts were made from averages of the 6 months, showing both the reported and the adjusted costs for standard fresh-mined white ash anthracite, both by collieries and by operating companies. As, in the prices fixed by the President August 23, 1917, a differential of 75 cents per ton on pea size and above, equivalent to 52.95 cents per ton on all sizes, was established for the independent operators over certain companies with railroad affiliation, generally known as the "companies." Charts were made by collieries for both the independent operators and the companies, as well as a combined chart of the entire output. Similar charts were also made for the entire output of fresh-mined coal and for the total output, including washery coal by operating companies, all collieries operated by a single company being consolidated, and for red ash and Lykens Valley coal, Plates Nos. 84, 85, and 90. These charts are interesting principally in that they show that the higher prices charged for these specialties were justified by their higher costs of production. The charts given are believed to fairly show the general costs of production.

TABLE 2.—*Average and bulk line costs of white ash coal.*

Chart No.	Description.	Costs, averages returned.	Costs, adjusted.	Cost, 90 per cent bulk line.
	Excluding washery coal:			
81	All operations, each colliery separate	$3.85	$3.91	$4.80
82	All company operations, each colliery separate	3.71	3.79	4.65
83	All independent operations, each colliery separate	4.37	4.36	4.97
86	All operations, each company operating two or more collieries consolidated	3.85	3.91	4.38
	Including washery coal:			
91	All operations, each company operating two or more collieries consolidated	3.57	3.77	4.36

TABLE 3.—*Average prices received for white ash coal.*

Size.	Fresh-mined coal.		Bank coal.		Total, including banks.	
	Per cent.	Average price.	Per cent.	Average price.	Per cent.	Average price.
Broken	6.8	$4.889	0.4	$4.416	6.2	$4.886
Egg	14.6	5.028	1.2	4.815	13.5	5.027
Stove	19.6	5.161	2.3	5.060	18.2	5.160
Nut	24.7	5.244	10.1	5.246	23.5	5.244
Pea	9.1	3.687	10.0	3.696	9.2	3.698
Total and weighted average, prepared and pea	74.8	4.959	24.0	4.544	70.6	4.947
Buckwheat	11.6	3.342	21.4	3.213	12.4	3.324
Rice	3.2	2.482	14.9	2.452	4.2	2.473
Barley	4.9	2.231	27.5	1.767	6.8	2.074
Boiler	3.9	2.341	8.8	2.123	4.3	2.304
Screenings	1.6	2.202	3.4	1.555	1.7	2.162
Total and weighted average, small sizes	25.2	2.795	76.0	2.339	29.4	2.697
Grand total	100.0	4.414	100.0	2.868	100.0	4.285

These charts show the averages and bulk line costs for standard white ash coal given in Table 2. The average prices received are given in Table 3.

The prices received by the companies and independents have not been separately averaged, but, calculating on the differential and assuming the percentages the same for companies and independents which is only approximately the case, the selling price of fresh-mined coal would average for companies $4.287, and for independents, $4.817. Margins over reported costs of companies would be 58 cents, and for independents 45 cents, with a general average margin for all fresh-mined coal of 56 cents, and for all coal, including washery, of 71 cents per ton, and under "bulk line" costs, fresh-mined companies, 36 cents; independents, 15 cents; total, 39 cents, including washeries consolidated sheets total of 7.5 cents.

These margins include all expenditures for Federal income and excess-profit taxes, selling expenses, interest charges, expenditures for improvements and developments to increase output, excess of capital expenditures over normal cost, and all profit on the investment of about $8 per ton annual output.

LABOR INCREASES.

Effective December 1, 1917, a labor war bonus, ranging from 60 cents to $1.10 per day for labor and 25 per cent for contract miners, was granted over and above the wage scales effective by agreement April 1, 1916, expiring April 1, 1920, and the prices fixed August 23, 1917, and modified October 1, 1917, by reducing pea coal 60 cents per ton, were increased by 35 cents per ton to compensate for this labor increase. The actual reported increase in labor cost due to this advance was figured by the Federal Trade Commission from the operators' reports to be 60.3 cents. From the actual pay-roll figures later obtained by the United States Fuel Administration, this increase was found to be 76.3 cents per ton.

Effective November 1, 1918, a second labor war bonus was granted. The calculated increase in cost due to this is shown in plate 91, on which the increases for each operator are found by figuring from the pay rolls for the 6 months the actual increase in pay which would have been given, applying the November 1, 1918, increases, and dividing by the 6 months' tonnage of the colliery. This line, adjusted to per cent of sizes, plotted on the chart shown in plate 91 and compared with the adjusted cost, shows an increase in cost of 74.1 cents. As this was necessarily applied to the prepared and pea sizes, 70.6 per cent of the total, the increase on these sizes was $1.05 per ton, which increase was allowed to balance the increased cost of labor.

PRICE FIXING.

Except for the two increases to compensate for labor increases just noted and the reduction October 1, 1917, of the pea coal price, the anthracite prices are as fixed by the President on August 23, 1917. The present realization, all companies and all sizes, including washery coal and both the labor increases, is calculated to average $5.13 per ton, while the bulk line of the chart shown in plate 91, plus the November, 1918, labor increase, would be $5.32.

TABLE 4.—*Prices fixed by the President, Aug. 23, 1917.*

	White ash.		Red ash.		Lykens Valley.	
	Company.	Independent.	Company.	Independent.	Company.	Independent.
Broken	$4.55	$5.30	$4.75	$5.50	$5.00	$5.75
Egg	4.45	5.20	4.65	5.40	4.90	5.65
Stove	4.70	5.45	4.90	5.65	5.30	6.05
Chestnut	4.80	5.55	4.90	5.65	5.30	6.05
Pea	4.00	4.75	4.10	4.85	4.35	5.10

TABLE 5.—*Fixed prices, Dec. 31, 1918.*

	White ash.		Red ash.		Lykens Valley.	
	Company.	Independent.	Company.	Independent.	Company.	Independent.
Broken	$5.95	$6.70	$6.15	$6.90	$6.40	$7.15
Egg	5.85	6.60	6.05	6.80	6.30	7.05
Stove	6.10	6.85	6.30	7.05	6.70	7.45
Chestnut	6.20	6.95	6.30	7.05	6.70	7.45
Pea	4.80	5.55	4.90	5.75	5.15	5.90

CAPITAL INVESTMENT.

The capital invested per ton output in the larger and better equipped collieries ranges from $5 to $11, with an average investment from $7.50 to $8.

PRICES FIXED.

The prices fixed by the President August 23, 1917, are given in Table 4. No price was fixed on sizes smaller than pea, which was decreased 60 cents per ton October 1, 1917. There was a general increase of 35 cents per ton December 1, 1917, and one of $1.05 per ton November 1, 1918. Sizes smaller than pea were limited to a maximum 50 cents per ton below pea coal by order of November 15, 1918.

TABLE 6.—*Average cost per ton, December, 1917, to May, 1918.*

	Fresh-mined coal, 35,256,550 tons.	Washery operations, 3,431,916 tons.	Total, including washeries, 38,688,466 tons.
Labor	$2.593	$0.687	$2.423
Supplies	.616	.260	.584
Transportation, mine to breaker	.004	.007	.004
Royalty, current	.153	.102	.148
Royalty, advance	.002	....	.002
Depletion	.099	.077	.097
Amortization of cost of leasehold	.014	.024	.016
Depreciation	.091	.086	.090
Pro rata suspended cost of stripping	.023	....	.021
Contract stripping and loading	.009	....	.009
Taxes, local	.054	.034	.052
Insurance, current	.016	.014	.016
Insurance, liability	.058	.018	.055
Officers' salaries and expenses	.030	.019	.029
Office salaries and expenses	.048	.024	.045
Legal expenses	.005	.003	.005
Miscellaneous	.026	.023	.026
Total	3.841	1.378	3.622
Increase over May to November, 1917	.764	.365	.719

The present fixed prices December 31, 1918, per ton of 2,240 pounds, f. o. b. mines, are given in Table 5. Smaller than pea is not to be sold within 50 cents of maximum pea-coal price. Thus the selling price of anthracite has been increased but 30.5 per cent over the prewar price, while the cost of production has gone up 52 per cent, the difference having been absorbed by the operators.

The average cost as reported for the six months, December, 1917, to May, 1918, inclusive, prior to the increase of November 1, 1918, but including that of December 1, 1917, is given in Table 6.

The regular price work of the committee required an intensive study of costs in all coal regions of the United States, the dividing of these regions into 92 bituminous districts on a cost basis in accordance with the Lever Act, and involved the making of hundreds of temporary and trial charts necessary in determining the territory to be assigned to each district. This often required the making of county charts which were afterward consolidated.

The committee has further studied and reported on all applications for changes and revisions of prices, many hundreds in number, with some 65 recommendations for changes in price or districting, and has received operators and committees from practically every district in the United States for conference on the peculiarities and needs of their districts, and in hearing applications for changes in prices or district boundaries.

In addition to their regular work very many special investigations and reports have been made on such subjects as preparation and special cleaning of coal, washing costs and regulations, bunker coal, the sizing of screenings, cannel and blacksmith coal, the control of wagon mines, prices for lake docks, studies and report on lake and seaboard pools, and on the possible pooling of anthracite, and an important arbitration of electric power rates in Virginia and Kentucky.

Members of the committee appeared before committees of the United States Senate in connection with the war-revenue bill and in the investigation of anthracite by the committee on manufactures, and submitted extensive reports of costs and of culm bank conditions to this committee.

Mr. Garnsey, the chairman of the committee, was appointed Assistant United States Fuel Administrator on May 3, 1918, and thereafter acted principally in an advisory capacity to the committee. Mr. Norris represented Dr. Garfield on the price-fixing committee of the War Industries Board from September until this committee disbanded.

Mr. Allport was abroad from October 19, 1918, to January 20, 1919, as one of the commissioners of the Fuel Administration studying the fuel conditions and needs of our Allies, and has since, besides writing his report, collected much data in connection with the export coal situation, much of which is shown graphically on Plates Nos. Exp. 1 to Exp. 28.

Besides the members of the committee, Messrs. John R. Pill and J. H. Fulford assisted as statisticians in the latter part of the work, and with Miss Jessie Benton, secretary, formed the regular staff of the committee

The committee worked throughout as volunteers without salary or expense allowance other than the $1 check received by each as a memento.

PRICES AND PRICE DISTRICTS.

Maximum prices which include the 45 cents per ton allowed in the President's order of October 27, 1917, in effect October 7, 1918, on a basis of 2,000 pounds f. o. b. cars at the mines, are given below.

State and district.	Run of mine.	Prepared sizes.	Slack or screenings.
ALABAMA:			
District No. 1.—Big Seam group: Big or Mary Lee and Newcastle seams, Blue Creek seam, except on Birmingham Mineral Branch of Louisville & Nashville R. R. south of Bessemer, Brookwood-Milldale seam when worked together, and Henry Ellen or Acmar seam	$2.45	$2.75	$2.40
District No. 2.—			
Cahaba group, being all seams in Cahaba field, including the Montevallo group, excepting the Climax, Henry Ellen or Acmar, Helena, and Harkness seams, and the No. 2 Belle Ellen mine in the Youngblood seam			
Black Creek group, being the Black Creek, Milldale, Carter, and Durie seams, the Underwood seam in Etowah and Blount Counties, and the Jefferson seam in Marion, Walker, and Winston Counties	3.45	3.75	3.10
District No. 3.—Pratt group: Pratt, Corona, Brookwood, Nickel Plate, America, Jagger, Coal City, Marion, and Belmont seams, Jefferson seam except in Walker, Marion, and Winston Counties, Mount Carmel seam or upper bench of Big seam, and the Blue Creek seam on Birmingham Mineral Branch of Louisville & Nashville R. R. south of Bessemer	2.85	3.05	2.45
District No. 4.—Helena and Harkness seams and coal mined by No. 2 Belle Ellen mine in Youngblood seam	2.90	3.20	2.70
District No. 5.—Mines in the Climax seam, in or about Maylene, Shelby County	4.60	4.85	2.50
Special prices—			
Coal mined by the Montevallo Mining Co	4.10	4.35	3.60
ARKANSAS:			
District No. 1.—Johnson, Franklin, and Sebastian Counties, except the Excelsior district[1]	4.05	4.95	2.75
District No. 2.—Logan and Scott Counties and the Excelsior district of Sebastian County, namely, mines on the Midland Valley R. R. (a) north of Montreal Junction and (b) east of Hackett and west of but not at Greenwood[1].	4.70	5.50	2.95
COLORADO:			
District No. 1.—Bituminous domestic coal, domestic field[2]	2.60	3.85	1.60
District No. 2.—Bituminous steam coal, Trinidad field[2]	2.70	3.60	2.00
District No. 3.—Lignite coal	2.60	3.60	1.35
Special prices—			
Coal mined by the Gibson Lumber & Fuel Co., in the Royal Gorge Mine, Canon City[3]	3.10	4.60 Nut, 4.10	1.85
Coal mined in the Canon City district by the Wolf Park Coal Co. and at the Radiant Mine of the Victor-American Fuel Co.[3]	2.60	4.60	1.60
Coal mined in the Trinidad district at the Gray Creek Mine of the Victor-American Fuel Co. and the Empire Mine of the Empire Mining Co.[4]	3.45	3.60	2.00
Coal mined in the Walsenburg district by the Aztec Coal Mining Co., Caprock Fuel Co., Caddell & Carlson, Premium Mining Co., Rugby Fuel Co., Gordon Coal Co., Black Canon Coal & Fuel Co., Geo. McNally Coal Co., Black Hawk Coal Co., Minnequa Coal Co., Monument Valley Fuel Co., Ideal Fuel Co., and the Breen Coal Co.[3]	2.60	4.60 Nut, 4.10	1.60
Coal mined in the Walsenburg district by the Rapson Mining Co., Cedar Hill Coal & Coke Co., Oakdale Coal Co., and the Ravenswood Mine of the Victor-American Fuel Co.[3]	2.60	4.60	1.60
Coal mined by the Williamsburg Slope Coal Co., at Florence, Fremont County	2.60	4.60	1.60
GEORGIA	$3.60	$3.85	$3.55
ILLINOIS:			
District No. 1, including Mercer, Bureau, Kankakee, La Salle, Grundy, Will, Putnam, Marshall, Livingston, Woodford, and McLean Counties	3.00	3.25	2.75
District No. 2, including Rock Island, Henry, Warren, Knox, Stark, Peoria, Hancock, McDonough, Henderson, Fulton, Tazewell, and Schuyler Counties	2.75	2.95	2.45
District No. 3, including Menard, Logan, Dewitt, Champaign, Vermillion, Sangamon, Pratt, Christian, Moultrie, Shelby, Greene, Macoupin, and Montgomery Counties, and Madison County north of the latitude of Alton: also all mines not included in other rulings	2.35	2.55	2.05
District No. 4, including Bond, St. Clair, Monroe, and Randolph Counties, and Madison County south of the latitude of Alton, and Clinton, Washington, and Perry Counties, not including mines along the line of Illinois Central R. R. between Vandalia and Carbondale	2.35	2.55	2.05
District No. 5, including Jackson County, not including mines on the line of the Illinois Central R. R. between Carbondale and Duquoin	2.75	2.95	2.45
District No. 6, including Marion, Jeffersou, Franklin, Williamson, Johnson, Hamilton, Saline, White, Gallatin, and mines along the main line of the Illinois Central R. R. between Vandalia and Carbondale in Clinton, Washington, Perry, and Jackson Counties	2.35	2.55	2.05
Special prices—			
Macon County	2.60	2.85	2.05
Coal mined by the Moweaqua Coal Mining & Manufacturing Co. at Moweaqua, Christian County	2.75	3.00	2.50
Coal mined by the Assumption Coal & Mining Co. at Assumption, Christian County	3.35	4.90	2.50
Coal mined by the Spoon River Colliery at Ellisville	3.00	3.25	2.75
Coal mined by the Latham Coal & Mining Co. in Logan County	2.50	2.70	2.20
INDIANA:			
District No. 1.—All coal not otherwise classified	2.35	2.55	2.05
District No. 2.—Brazil Block	3.30	3.60	2.05
Special prices—			
Coal mined by the Essanbec Mines Co. in Vermilion County	2.75	2.95	2.45
Coal mined at the Linton Summit mine by the Atlas Mining Co. in Greene County	2.65	2.85	2.35
IOWA:			
District No. 1.—All coal not otherwise classified	3.05	3.30	2.80
District No. 2.—Appanoose, Wayne, Boone, and Webster Counties	3.10	3.45	2.35
KANSAS:			
District No. 1.—Cherokee and Crawford Counties, except shaft mines in Lightning Creek or upper thin vein, and any mining operations in the State not covered by other rulings	3.05	3.30	2.80
District No. 2.—Shaft workings in the Lightning Creek or upper thin vein in Cherokee and Crawford Counties	4.00	4.30	2.80
District No. 3.—Osage, Franklin, and Linn Counties	3.85	4.85	3.15
District No. 4.—Leavenworth County	3.75	4.00	3.25
Special prices—			
Cherokee and Crawford Counties—			
Mill coal $2.95			
Nut run or stoker coal 3.05			
KENTUCKY:			
District No. 1.—All coal mined west of the eighty-fifth degree of longitude except operations listed below	2.35	2.60	2.50

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[1] These prices are subject to the following monthly summer reductions on all grades except slack; August 1, the base price is again effective: March, 75 cents; April, 60 cents; May, 45 cents; June, 30 cents; July, 15 cents.

[2] These prices are subject to the following monthly summer reductions: On Aug. 1 the base price is again effective: Bituminous domestic coal, domestic field, prepared sizes only: Apr. 1, 70 cents; May 1, 50 cents; June 1, 35 cents; July 1, 15 cents. Bituminous steam coal, Trinidad district, prepared sizes only: Apr. 1, 40 cents; May 1, 30 cents; June 1, 20 cents; July 1, 10 cents.

[3] The price for prepared sizes is subject to the following monthly summer reduction of 70 cents for Apr.; 50 cents for May; 35 cents for June; 15 cents for July. On Aug. 1, the base price is again effective.

[4] The price for prepared sizes is subject to the following summer reductions: 40 cents for the month of Apr.; 30 cents for the month of May; 20 cents for the month of June; 10 cents for the month of July.

State and district.	Run of mine.	Pre-pared sizes.	Slack or screen-ings.
KENTUCKY—Continued.			
District No. 2.—The counties of Letcher, Harlan, except coal produced by the Loony Creek Coal Co., and Perry County, except coal produced at the Glomawr mine of the Reliance Coal & Coke Co. and operations in Perry County included in district No. 3	$2.55	$2.80	$2.30
District No. 3.—That part of Kentucky east of the eighty-fifth degree of longitude, excepting Letcher, Harlan, and Martin Counties, that part of Pike County on the watershed of the Tug Fork of the Big Sandy River and the operation of the Kentucky Block Cannel Coal Co., south of the Licking River in Morgan County, and that part of Perry County included in District No. 2, but including the operations in Perry County of Hazard Coal Co., Diamond Block Coal Co., Coneva Coal Corporation, Storm King Coal Co., C. H. McDonald Coal Co., Four Seam Block Coal Co., Daniel Boone Coal Co., Blue Grass Coal Corporation, Columbus Mining Co., No. 4 Coal Co., and Walker's Branch Mining Co.	3.00	3.25	2.75
District No. 4, or Thacker.—Operations in Pike County on the watershed of the Tug Fork of the Big Sandy River east of Williamson on the Norfolk & Western R. R.	2.65	2.90	2.40
District No. 5, or Kenova.—Martin County and operations in Pike County on the watershed of the Tug Fork of the Big Sandy River west of Williamson on the Norfolk & Western R. R.	2.65	2.90	2.40
Special prices—			
Blue Gem coal produced in Knox and Whitley Counties by operators who are members of the Tri-County Blue Gem Coal Operators Association	3.90	4.15	2.75
Coal produced in Whitley County by the Wallen-Jellico Coal Co	3.70	3.95	2.95
Coal mined by the Norton Coal Co., White Plains Coal Co., and B. D. Williams Coal Co. in the Empire or Mannington Seam in Christian and Hopkins Counties	2.80	3.05	2.45
Coal mined by the Kentucky Block Cannel Coal Co., south of the Licking River in Morgan County	3.90	3.95	2.75
Coal mined by the Loony Creek Coal Co. in Harlan County and by the Reliance Coal & Coke Co. at its Glomawr mine in Perry County	3.00	3.25	2.75
MARYLAND	2.75	3.00	2.50
MICHIGAN	3.50	3.95	2.90
Special prices—			
Handy Bros. Mining Co	4.00	4.70	[1] 3.30
What Cheer Coal Mining Co. (except Flint mine)	4.00	4.70	[1] 3.30
Robert Gage Coal Co. (Black Diamond mine)	4.00	4.70	[1] 3.30
Banner Coal Co	4.00	4.70	[1] 3.30
Bliss Coal Co	3.85	4.40	[1] 3.30
Consolidated and Wolverine Coal Co	3.85	4.40	[1] 3.30
Robert Gage Coal Co. (except Black Diamond mine)	3.85	4.40	[1] 3.30
Community Coal Co	3.85	4.40	[1] 3.30
What Cheer Mining Co. (Flint Mine)	4.50	6.00	[1] 3.30
B. S. K. Coal Co	4.00	5.00	[1] 3.30
Superior Coal Co	4.00	6.00	[1] 3.30
Savage Coal Co	4.00	6.00	[1] 3.30
MISSOURI:			
District No. 1.—Counties of Schuyler, Adair, except operation of the Star Coal Co. Macon County east of New Cambria and mining operations not covered by other rulings. Randolph, Monroe, Ralls, Audrian, Callaway, and Montgomery Counties	3.05	3.30	2.80
District No. 2.—Counties of Putnam, Sullivan, Linn, Chariton, Carroll, Ray, Clay, and Lafayette, and Macon County west of New Cambria, and the long wall thin seam mines, in Randolph County	3.50	3.75	2.80
District No. 3.—Grundy County, operations of the Star Coal Co. in Adair County and shaft workings in the Lightning Creek, or upper thin vein in Barton, Bates, and Vernon Counties	4.00	4.30	2.80
District No. 4.—Harrison County	3.50	3.75	2.80
District No. 5.—Platte County	3.75	4.00	2.80
District No. 6.—Boone and Cooper Counties	3.50	3.75	2.80
District No. 7.—Johnson, Henry, St. Clair, Bates, Vernon, and Barton Counties	3.05	3.30	2.80
District No. 8.—Dade County	3.50	3.75	2.80
Special prices—			
Coal mined by the Home Coal Co. in Macon County	3.50	3.75	2.80
Coal mined by the Moniteau Co. in Moniteau and Morgan Counties	4.95	5.45	2.90
Canneloid coal mined at the Johnson mine in Anaconda, Franklin County, by J. S. Turley	3.90	......	......
MISSOURI—Continued.			
Barton and Vernon Counties—			
Mill coal $2.95			
Nut run or stoker coal 3.05			
MONTANA	$3.05	$3.95	$1.35
NEW MEXICO:			
District No. 1.—Raton district [2]	2.70	3.60	2.00
District No. 2.—Gallup field [2]	3.40	4.40	2.35
District No. 3.—Carthage field [2]	4.60	5.40	3.90
District No. 4.—Cerrillos field [3]	4.50	5.50	4.00
District No. 5.—Sugarite and Monero fields [2]	3.35	4.35	2.35
NORTH DAKOTA (lignite coal):			
District No. 1.—All coal mined south of the twelfth standard parallel—			
Run of mine $2.60			
Prepared sizes 2.85			
6-inch steam lump 2.35			
Screenings or slack 1.60			
District No. 2.—All coal mined north of the twelfth standard parallel—			
Run of mine $3.05			
Prepared sizes 3.35			
6-inch steam lump 2.85			
Screenings 1.35			
OHIO:			
District No. 1.—The county of Meigs and the townships of Cheshire and Addison in the county of Gallia	2.75	3.00	2.50
District No. 2.—The counties of Vinton, Jackson, Lawrence, Sciota, Pike, and the county of Gallia, except the townships of Cheshire and Addison	3.40	3.65	3.25
District No. 3.—The counties of Hocking and Athens, and the townships of Coal and Monroe in the county of Perry and the township of Homer in the county of Morgan	2.50	2.75	2.25
The Bailey Run or No. 7 seam	2.90	3.15	2.65
District No. 4.—The counties of Washington and Noble, the county of Morgan except the township of Homer, and the county of Perry except the townships of Coal and Monroe	2.90	3.15	2.65
District No. 5.—The county of Muskingum	2.65	2.90	2.40
District No. 6.—The counties of Holmes, Tuscarawas, Carroll, Coshocton, and the townships of Monroe, Franklin, Washington, and Freeport in the county of Harrison, and the townships of Washington and Yellow Creek in the county of Columbiana, and the townships of Brush Creek, Saline, Springfield, Ross, and Knox in the county of Jefferson and operations in the 8-A vein in Flushing and Union Townships in the county of Belmont	2.90	3.15	2.65
District No. 7.—The counties of Trumbull, Portage, Summit, Mahoning, Medina, Wayne, and Stark, and the county of Columbiana except the townships of Washington and Yellow Creek	3.40	3.65	3.25
District No. 8.—The county of Meuroe, the county of Belmont except the township of Warren and operations in the 8-A vein in Flushing and Union Townships, the county of Harrison except the townships of Monroe, Franklin, Washington, and Freeport, and the county of Jefferson except the townships of Brush Creek, Saline, Ross, Knox, and Springfield	2.35	2.60	2.35
District No. 9.—The county of Guernsey and the township of Warren in Belmont County	2.50	2.75	2.25
Special prices—			
Coal mined by the Wayne Mining Co. in Guernsey county	2.95	3.20	2.70
OKLAHOMA:			
District No. 1.—Le Flore, Haskell, Okmulgee, Tulsa, Rogers, and Coal Counties, and the Hartshorn-Wilburton vein in Pittsburgh and Latimer Counties [4]	4.05	4.95	2.75
District No. 2.—McAlester vein in Pittsburgh and Latimer Counties [4]	4.60	5.45	3.35
PENNSYLVANIA:			
District No. 1.—Operations in the counties of Tioga, Lycoming, Clinton, Center, Huntingdon, Bedford, Cameron, Elk, Clearfield, Cambria, Blair, Somerset, Jefferson, Indiana, Clarion, Armstrong, Butler, Mercer, Lawrence, and Beaver, and operations in Allegheny County from the lower end of Tarentum Borough north to the county line, and in Westmoreland County from a point opposite the lower end of Tarentum Borough north along the Allegheny River to the Kiskiminitas River, and along the Kiskiminitas River eastward to the Conemaugh River, and continuing along the Conemaugh River to the county line of Cambria County and operations on the Baltimore & Ohio R. R. from the Somerset County line to and including Indian Creek and the Indian Creek Valley branch of the Baltimore & Ohio R. R	2.95	2.95	2.95

[1] Nut and slack.

[2] Subject to the following monthly summer reductions on prepared sizes only: Apr. 1, 50 cents; May 1, 40 cents; June 1, 30 cents; July 1, 20 cents; Aug. 1, 10 cents. On Sept. 1, the base price is again effective.

[3] Subject to the following monthly summer reductions: 25 cents for the month of July, and 15 cents for the month of August.

[4] These prices are subject to the following monthly summer reductions on all grades except slack: On Aug. 1 the base price is again effective: March, 75 cents; April, 60 cents; May, 45 cents; June, 30 cents; July, 15 cents.

State and district.	Run of mine.	Prepared sizes.	Slack or screenings.
PENNSYLVANIA—Continued.			
District No. 2.—Operations in the counties of Allegheny, Westmoreland, Fayette, Greene, and Washington, except (1) that portion of Allegheny County from the lower end of Tarentum Borough north to the county line, (2) the territory in Westmoreland County from a point opposite the lower end of Tarentum Borough north along the Allegheny River to the Kiskiminitas River and along the Kiskiminitas River eastward to the Conemaugh River and continuing along the Conemaugh River to the county line of Cambria County, (3) operations on Indian Creek in Westmoreland County, and (4) operations in the Ohio Pyle district of Fayette County	2.35	2.60	2.35
Special prices—			
Coal mined by the Fall Brook Coal Co., in Tioga County	2.95	3.25	2.75
Coal mined at the stripping operation of the Graff Mining Co. in Westmoreland County [1]	2.95	2.95	2.95
TENNESSEE:			
District No. 1.—All except Overton and Fentress Counties	3.00	3.25	2.75
District No. 2.—Overton and Fentress Counties.	2.55	2.80	2.30
Special prices—			
Blue Gem Coal produced in Campbell County by operators who are members of the Tri-County Blue Gem Coal Operators Association	3.90	4.15	2.75
Coal mined at the Bon Air Mine by the Bon Air Coal & Iron Corporation in White County	3.90	4.15	2.75
Coal mined by the White Oak Coal Co. in Fentress County	3.00	3.25	2.75
TEXAS:			
District No. 1.—State of Texas, except Erath, Young, Palo Pinto, and Wise Counties [2]	4.70	5.50	2.70
District No. 2.—Erath, Young, and Palo Pinto Counties [2]	3.85	5.00	2.70
District No. 3.—Lignite coal	2.00	2.20	1.45
District No. 4.—Wise County [2]	4.70	5.85	2.70
UTAH	3.00	3.65	1.85
VIRGINIA:			
District No. 1.—All coal not otherwise classified.	2.35	2.60	2.10
District No. 2.—Operations in the Richmond Basin within Chesterfield and Henrico Counties	3.65	3.90	3.40
District No. 3.—Clinch Valley No. 1 district, or "Upper Clinch;" coal-mining operations on the Norfolk & Western Ry., Hockman to Finney, inclusive	2.85	3.10	2.60
District No. 4.—Pocahontas District (see West Virginia)	2.35	2.60	2.10
District No. 5.—Lee, Wise, and Dickenson Counties, and Russell County west of Finney, on the Norfolk & Western Ry	2.55	2.80	2.30
Special prices—			
Coal mined by the Splash Dam Coal Corporation and the McClure Coal Corporation in the County of Dickenson	2.85	3.10	2.60
Mines operated near St. Charles, Lee County, by the Cumberland Coal Co., Penn Lee Coal Co., Leecova Coal Co., Wilma Coal Co., Darby Coal Mining Co., Black Mountain Mining Co., Virginia Lee Co., Old Virginia Coal Co., United Collieries Co. (Inc.), Benedict Coal Corporation, the Imperial Mine of the Virginia Iron, Coal & Coke Co., Roanoke; Mohawk Coal Mining Co., of Keokee; Powell River Coal Co., of Purcell; North Fork Coal Co., T. M. Morrison Coal Co., and the Lone Mountain Coal Co., of Pennington Gap	3.00	3.25	2.75
WASHINGTON: [3]			
Screened coals—			
Bituminous—			
District No. 1.—Kittitas County—			
Run of mine $3.45			
Prepared sizes—			
Lump and egg 3.85			
Special steam and gas ... 3.15			
Slack 2.40			
Subbituminous—			
District No. 2.—Lewis and Thurston Counties—			
Run of mine $2.65			
Prepared sizes—			
Lump 3.85			
Lump nut 3.15			
Nut 2.90			
Slack 1.15			
Washed coals—			
Bituminous—Kittitas County—			
Prepared sizes 3.90			
WASHINGTON—Continued.			
Washed coals—			
Bituminous—Kittitas County—			
District No. 3—Pierce, King, Lewis, and Skagit Counties—			
Prepared sizes—			
Lump nut $5.90			
Mixed steam 5.15			
Straight steam and gas ... 4.70			
Slack 2.40			
Subbituminous—			
District No. 4—King County—			
Prepared sizes—			
Lump nut 4.90			
Pea 3.40			
Buckwheat 3.15			
Slack 1.40			
District No. 5—Lewis County—			
Prepared sizes—			
Lump 3.85			
Nut 3.65			
Pea 2.90			
Buckwheat 1.40			
Slack 1.15			
WEST VIRGINIA:			
District No. 1 (Pocahontas)—Operations on the Norfolk & Western Ry. and branches west of Graham, Va., to Welch, W. Va., including Newhall, Berwind, Canebrake, Hartwell, and Beech Fork branches; also operations on the Virginian Ry., and branches west of Rock to Herndon, W. Va. [4]	$2.35	$2.60	$2.10
District No. 2 (Tug River)—Coal-mining operations on the Norfolk & Western Ry. west of Welch to and including Panther, including branches, except Newhall, Berwind, Canebrake, and Hartwell [4]	2.75	3.00	2.50
District No. 3 (Thacker)—Operations in McDowell County west of Panther on the Norfolk & Western Ry., and in Mingo County west along the Tug Fork of the Big Sandy River to Williamson, on the Norfolk & Western Ry	2.65	2.90	2.40
District No. 4 (Kenova)—Operations on the watershed of the Tug Fork of the Big Sandy River west of Williamson on the Norfolk & Western Ry. and Wayne County	2.65	2.90	2.40
District No. 5 (Logan)—Logan County and operations in Boone County south of Danville on the Chesapeake & Ohio R. R. in Lincoln County south of Gill on the Chesapeake & Ohio R. R	2.50	2.75	2.25
District No. 6 (New River)—Operations in Fayette County east of the Gauley River to Hawk's Nest on the Chesapeake & Ohio R. R. and east of a line drawn from Hawk's Nest to Lively on the Virginian R. R., and the counties of Fayette and Raleigh, south of Lively, and the county of Wyoming, north of Herndon, on the Virginian R. R. [4]	2.70	2.95	2.45
District No. 7 (Kanawha)—Operations in Nicholas County, west of the mouth of the Meadow Branch of the Gauley River, the county of Fayette west of the Gauley River and north of the Kanawha and west of a line drawn from Hawk's Nest on the Chesapeake & Ohio R. R. to Lively on the Virginian R. R., and operations in the counties of Raleigh and Boone on the watershed of the Clear Fork Branch of Coal River, and the county of Boone north of Danville on the Chesapeake & Ohio R. R. and the counties of Kanawha and Clay south of Charleston and the county of Lincoln north of Gill on the Chesapeake & Ohio R. R	2.60	2.85	2.35
District No. 8—Putnam County	2.85	3.10	2.60
District No. 9—Coal mined in Mason County	2.75	3.00	2.50
District No. 10—Coal and Coke and Gauley districts: Taylor, Barbour, Lewis, Upshur, Randolph, Gilmer, Braxton, Webster, and Greenbrier Counties; operations in Nicholas County east of the mouth of the Meadow Branch of the Gauley River, and the Coal and Coke district in Kanawha and Clay Counties north of Charleston	2.65	2.90	2.40
District No. 11—The Upper Potomac, Cumberland and Piedmont fields, comprising all coal mined in the State of Maryland, and in the counties of Mineral, Grant, Tucker, and Preston in West Virginia	2.75	3.00	2.50
District No. 12 (Fairmont)—Monongalia, Marion, and Harrison Counties	2.50	2.75	2.25
District No. 13—Coal mined in the counties of Hancock, Brooke, Ohio, and Marshall	2.35	2.60	2.35
Special prices—			
Mines operated near Richwood, Nicholas County, by the Saxman Coal & Coke Co	3.15	3.40	1.90
WYOMING	3.00	3.65	1.85
Subbituminous:			
Egg run $2.50			
Nut run 2.35			

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[1] Flat prices.

[2] These prices are subject to the following monthly summer reductions: Apr. 1, 75 cents; May 1, 60 cents; June 1, 45 cents; July 1, 30 cents; Aug. 1, 15 cents.

[3] Preparation of coal mined within the State of Washington shall conform to reports submitted to and approved by State Mine Price Board, subject to such further modifications as may be approved by State Fuel Administrator.

[4] In the Pocahontas district of Virginia and West Virginia, and the New River and Tug River districts of West Virginia, where slack or screenings passing through the standard screens customarily used prior to January 1, 1916, constitute not less than 55 per cent of the mine run output of any mine, such slack or screenings may be sold at not to exceed the applicable Government price at date of shipment for run of mine produced at said mine.

PRICES OF BITUMINOUS COAL AT THE LAKE DOCKS.

Effective August 26, 1918, bituminous coal of the grades hereinafter specified received at any Lake Michigan or Lake Superior dock from and including the effective date of this order, to and including April 30, 1919, and reshipped by rail from the docks to purchasers buying in carload lots, may be sold at prices f. o. b. cars at the dock not to exceed the following per net ton, viz:

Coal from—	Lump.	Run of pile.	Screenings.
Southwestern district in the State of Pennsylvania, Fairmont and Panhandle districts in the State of West Virginia, and districts Nos. 3, 8, and 9 in the State of Ohio	$5.80	$5.55	$5.30
Harlan, Thacker, and Kenova districts in the State of Kentucky, the Thacker, Kenova, Kanawha, and Mason County districts in the State of West Virginia, and districts Nos. 1. 2, 4, 5, 6, and 7 in the State of Ohio	6.30	6.05	5.80
Pocahontas, New River, and Tug River districts in the State of West Virginia	6.30	6.05	6.05

The above prices are based on freight rates between the mines and Lake Erie ports effective June 1, 1918. An amount equivalent to any increase in such freight rates by order of the United States Railroad Administration in effect at the effective date hereof may be added to such prices, and in the event that any further increase in such freight rates shall become effective at any time hereafter, an additional amount equivalent to such further increase may also be added to such prices.

For coal so received by lake shipment at any of the docks aforesaid, and sold for delivery by truck, wagon, or other usual facility for retail delivery to consumers without any rail reshipment, prices must be fixed and determined in the manner and according to the provisions and limitations prescribed in the regulations of the United States Fuel Administrator relative to maximum gross margins of retail coal dealers.

REGULATION FIXING THE PRICE OF CANNEL COAL AND THE MIXTURE OF CANNEL COAL AND BITUMINOUS COAL.

Section I. The prices of cannel coal shipped on and after 7 a. m. July 16, 1918, are fixed f. o. b. cars at the mine per net ton at not to exceed the applicable Government mine price for bituminous coal at the mine where such cannel coal is produced; provided, however, that if the producer of such cannel coal shall obtain from the United States Fuel Administration a permit therefor, lump cannel coal may be sold for a sum not to exceed $1 per net ton above the applicable Government mine price for run of mine bituminous coal at the mine where such coal is produced.

Sec. II. Any producer desiring to obtain a permit to make the additional charge of cannel coal provided in Section I of this regulation may file with the Bureau of Prices of the United States Fuel Administration, Washington, D. C., an application therefor in such form as said Bureau of Prices may from time to time prescribe.

Sec. III. All invoices for cannel coal for which the additional charge provided in Section I hereof is made must bear the number of the permit of the producer of such coal.

Sec. IV. When cannel coal is loaded into box cars, a charge of 50 cents per net ton in addition to the prices fixed in Section I hereof may be made to cover the cost of labor and material necessary to load such coal into box cars. No such charge shall be made on shipments in box cars of cannel coal mixed with bituminous coal.

Sec. V. When run of mine or prepared cannel coal is mixed with bituminous coal of any size the mixture shall be sold at a price not to exceed the Government mine price for bituminous screenings applicable at date of shipment at the mine where such cannel coal is produced.

Sec. VI. When cannel coal, from which the lumps have been screened, is mixed with bituminous coal of any size the mixture shall be sold at a price not to exceed the Government mine price for bituminous screenings applicable at date of shipment at the mine where such cannel coal is produced less 30 cents net per ton.

REGULATION FIXING THE PRICE OF MODIFIED MINE RUN COAL.

The prices of "modified mine run" coal shipped on and after July 5, 1918, are fixed f. o. b. cars at the mine per net ton, at not to exceed the applicable Government mine prices for screenings at the mine where such "modified mine run" coal is produced plus the following percentages of the margin or difference between the applicable Government mine prices for mine run and screenings at such mines, viz:

Run of mine passed through 2-inch openings, 40 per cent of such margin.
Run of mine passed through 3-inch openings, 75 per cent of such margin.
Run of mine passed through 4-inch openings, 90 per cent of such margin,
Run of mine passed through 5-inch openings, 95 per cent of such margin.
Run of mine passed through 6-inch or larger openings shall take the applicable Government price for run of mine.

The word "openings" is construed to mean either bar openings or round perforations in shaking screens, both bars and shaking screens to be of the proper size and length to handle efficiently the total amount of coal which is passed over them.

REGULATION FIXING THE PRICES OF SIZED SCREENINGS.

The prices of sized screenings shipped on and after August 1, 1918, are fixed f. o. b. cars at the mine per net ton as follows:

1. For all special sizes passing over a mesh over one-half inch in size, the applicable Government mine price for prepared coal at the mine where such screenings are produced.
2. For all special sizes passing over a mesh over one-quarter inch and under one-half inch in size, the applicable Government mine price for run of mine coal at the mine where such special sizes are produced.
3. For all fine sizes from sized coal passing through a mesh one-half inch or smaller in size, the applicable Government mine price for standard screenings at the mine where such fine screenings are produced, less 30 cents per net ton.
4. If fine screenings or "carbon" passing through one-half inch or smaller mesh as the result of producing special sized screenings are mixed with other coal, whether the same be mine run, prepared or standard screenings, the selling price of the mixture shall not exceed the applicable Government mine price for standard screenings at the mine where such mixture is produced, less 30 cents per net ton.

REGULATION ESTABLISHING THE DEFINITION OF SLACK OR SCREENINGS AND PREPARED SIZES.

Section I. Slack or screenings: Effective 7 a. m. June 1, 1918, the term "slack or screenings" as used in the Executive order of the President dated August 21, 1917, and in the orders of the United States Fuel Administrator fixing prices for bituminous coal, shall, from and after the effective date of this regulation, apply to and include coal which, when loaded at the mine, passes through the accepted standard screens customarily used for making slack or screenings at such time prior to January 1, 1916.

Sec. II. Application for specific screen specifications or for modification of customary or current specifications as named in Section I will receive consideration when made by consumers or producers in such form as the United States Fuel Administrator may from time to time prescribe.

Sec. III. Prepared sizes: The term "prepared sizes" as used in the Executive order of the President dated August 21, 1917, and in the orders of the United States Fuel Administrator fixing prices of bituminous coal shall, on and after the effective date of this regulation, include only coal which, when loaded at the mine, passes over the screens specified in Section I for the district in which such coal is mined.

Sec. IV. The United States Fuel Administrator may, upon application from producers or consumers in any district, establish prices for any special size different from those specified in Sections I and III or for any mixture of sizes which special size or mixture is required for the proper distribution of coal from such district.

REGULATION CONCERNING SPECIAL METHODS OF CLEANING AND PREPARING BITUMINOUS COAL AND THE CONDITIONS UNDER WHICH INCREASED PRICES MAY BE CHARGED THEREFOR.

Section I. Mechanical preparation; effective 7 a. m., June 1, 1918: No special allowance will be made for the ordinary method of cleaning or picking coal employed in any district, but a special allowance will be made for coal mechanically washed or extraordinarily cleaned or picked in such manner that the fuel value of the coal has been substantially increased by the removal of waste and impurities. Such allowance will be specifically determined by the United States Fuel Administration and the reason for such allowance and the amount thereof will be set forth in a permit to be applied for and issued pursuant to the provisions of Sections II, III, IV, and V hereof.

Sec. II. Any person, firm, or corporation desiring to obtain a permit under this regulation may file with the Bureau of Prices of the United States Fuel Administration an application in such form as the United States Fuel Administration may from time to time prescribe.

Sec. III. On receipt of a written application, as provided in Section II of this regulation, for authority to make an additional charge per net ton for coal specifically prepared in the manner indicated in Section I hereof the United States Fuel Administrator may, in his discretion, issue a permit authorizing the applicant to make such additional charge. Every such permit shall be in writing, shall be signed and numbered by the United States Fuel Administrator or by his duly authorized representative, shall be subject at all times to revocation or cancellation by the United States Fuel Administrator, and shall be in such form and subject to such terms, conditions, restrictions, provisions, and requirements as may from time to time be prescribed by the United States Fuel Administrator.

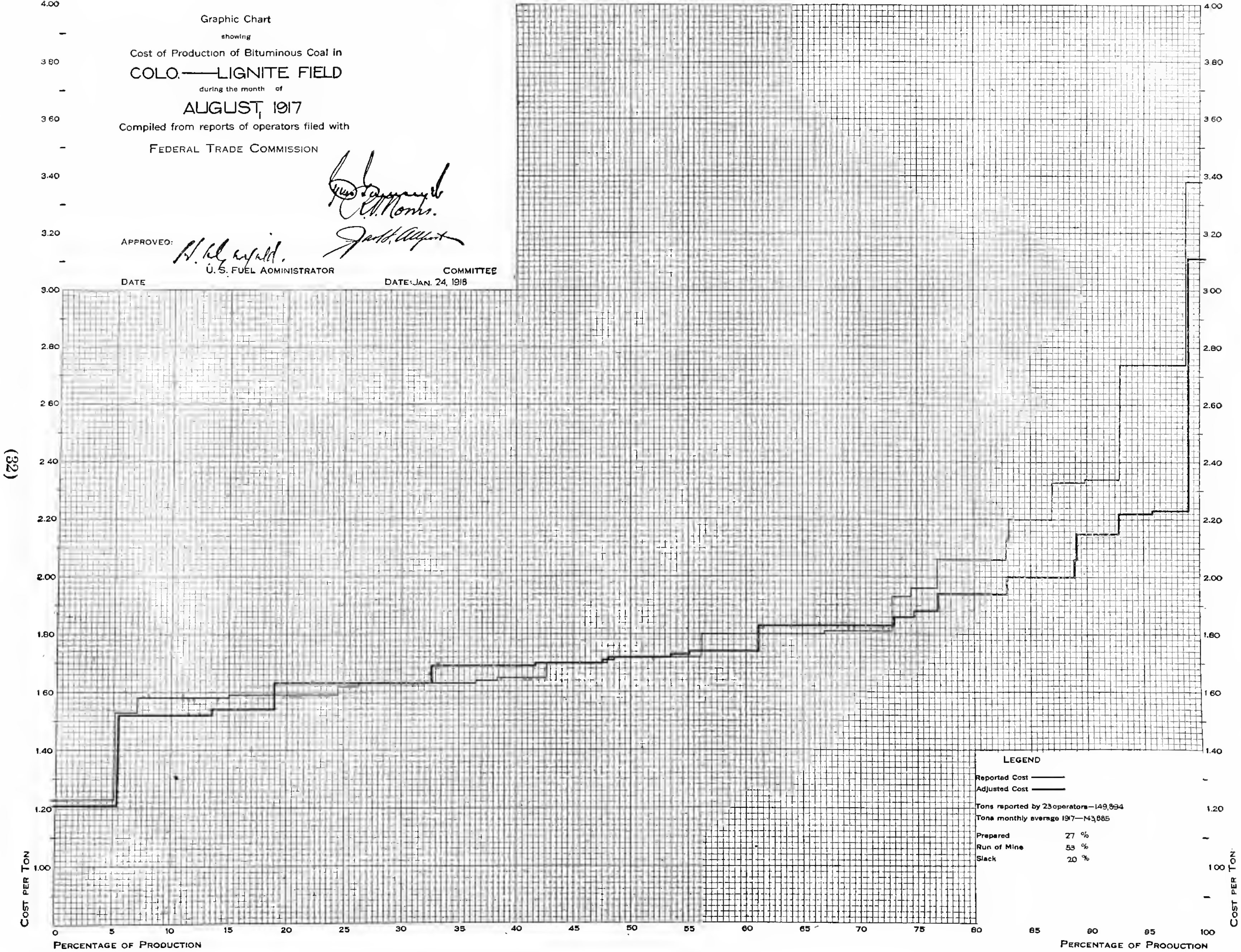
Sec. IV. The amount added to the base price pursuant to a permit, issued under this regulation, together with the number of the permit, must be separately stated on each invoice.

Sec. V. Reports shall be made to the United States Fuel Administration by each operator holding a permit hereunder upon such dates, in such form, and containing such information as may from time to time be prescribed or required by the United States Fuel Administration.

Sec. VI. Nothing in this regulation contained shall be construed in any manner whatsoever to relieve any operator from the obligation to exercise the highest degree of care in mining coal, to the end that excessive quantities of rock, slate, bone, sulphur, fire clay, shale, or other ash-forming impurities shall be eliminated therefrom, nor from the obligation to prepare coal in such manner that the same would have been considered clean and merchantable under normal market conditions existing prior to the present war.

UNITED STATES FUEL ADMINISTRATION

No. I



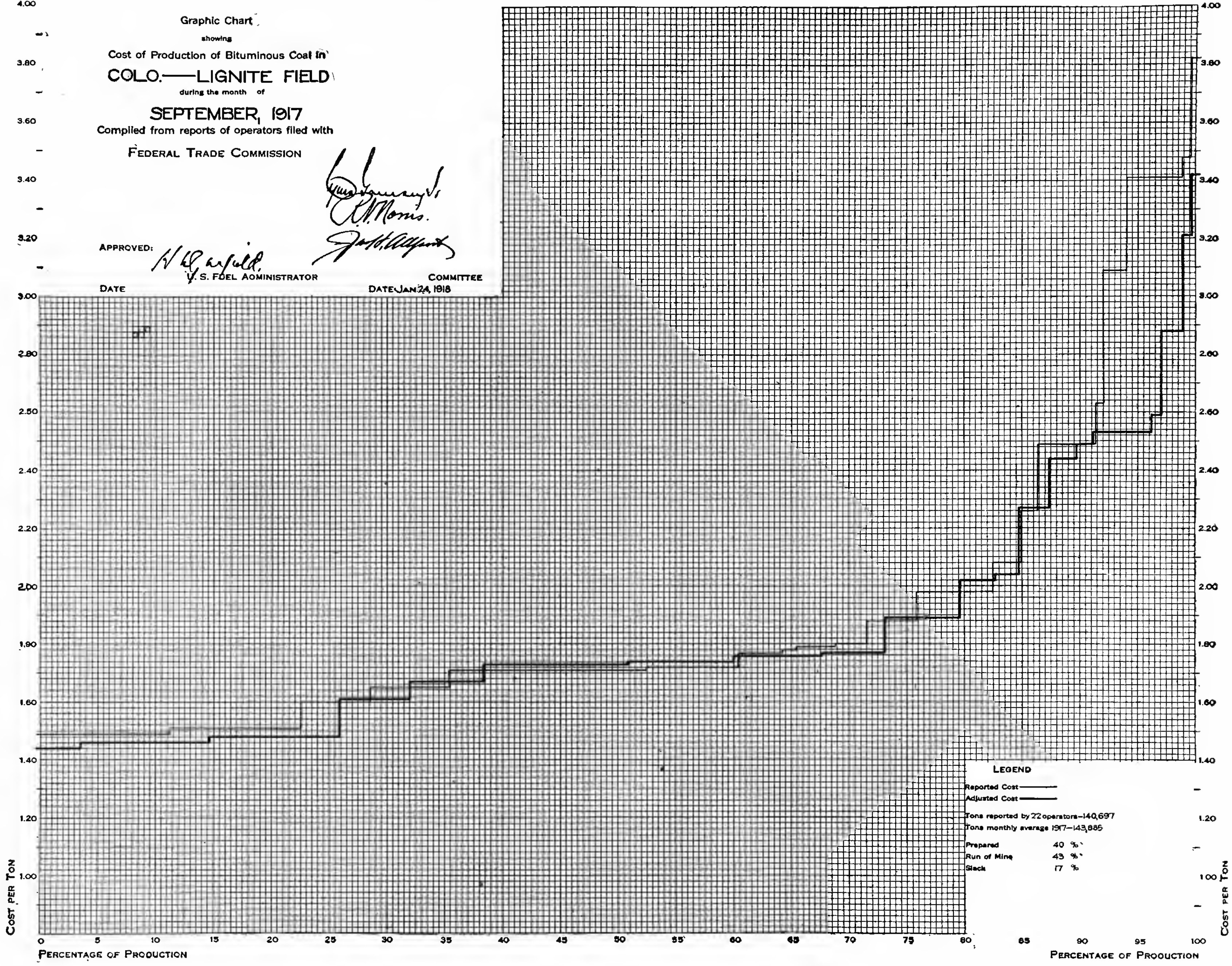
Graphic Chart
showing
Cost of Production of Bituminous Coal in
COLO.——LIGNITE FIELD
during the month of
AUGUST, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED:
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE: JAN. 24, 1918

UNITED STATES FUEL ADMINISTRATION

No. 2



Graphic Chart
showing
Cost of Production of Bituminous Coal in
COLO.—LIGNITE FIELD
during the month of
SEPTEMBER, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE JAN. 24, 1918

UNITED STATES FUEL ADMINISTRATION

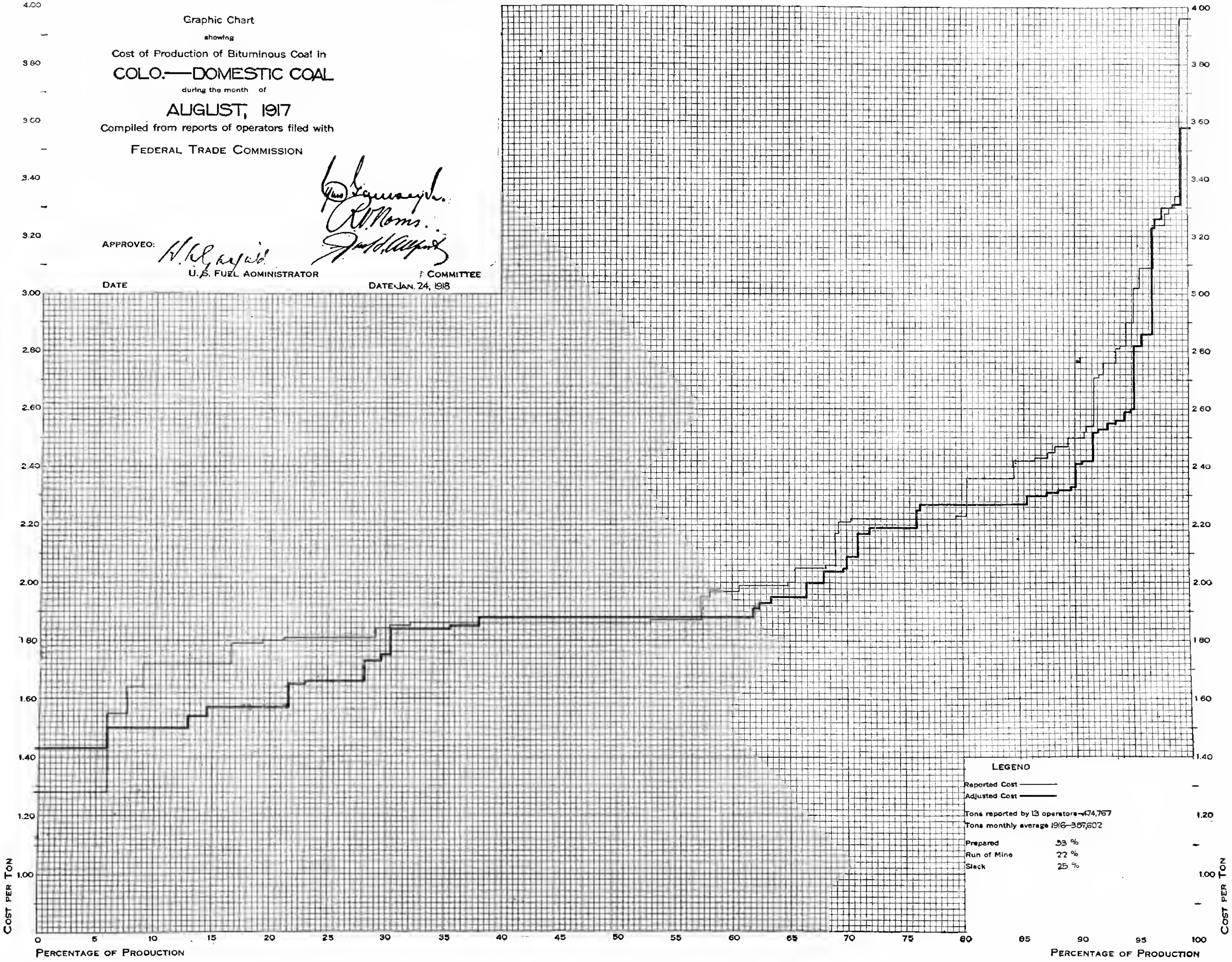
No. 3

Graphic Chart
showing
Cost of Production of Bituminous Coal in
COLO.—DOMESTIC COAL
during the month of
AUGUST, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

R. V. Norris
Jas. H. Allport

APPROVED: H. A. Garfield
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE JAN. 24, 1918



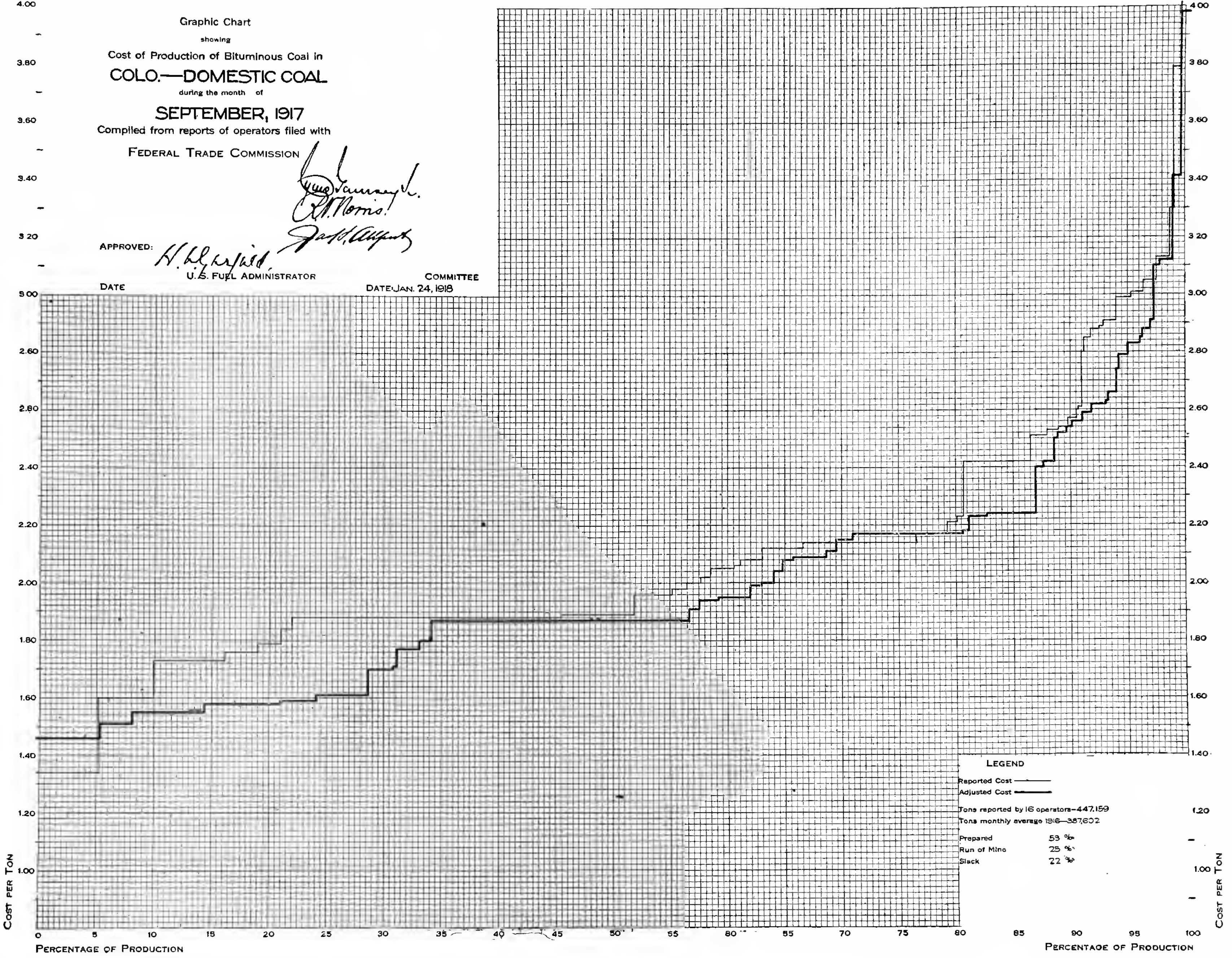
UNITED STATES FUEL ADMINISTRATION

No. 4

Graphic Chart
showing
Cost of Production of Bituminous Coal in
COLO.—DOMESTIC COAL
during the month of
SEPTEMBER, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR
DATE

Cyrus Garnsey Jr.
C. A. Morris.
Jas. H. Allport
COMMITTEE
DATE: JAN. 24, 1918



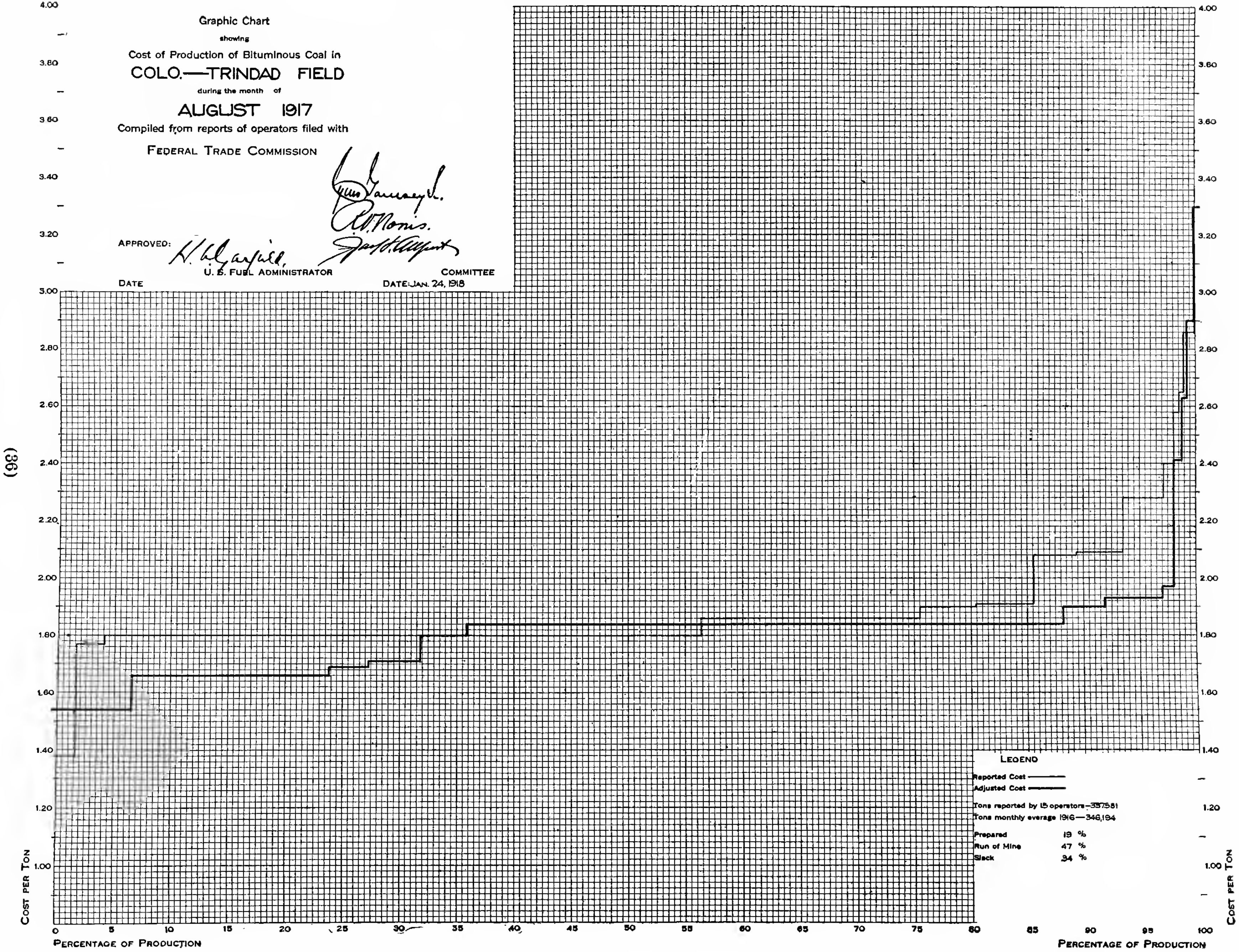
UNITED STATES FUEL ADMINISTRATION

No. 5

Graphic Chart
showing
Cost of Production of Bituminous Coal in
COLO.—TRINDAD FIELD
during the month of
AUGUST 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield,
U. S. FUEL ADMINISTRATOR
DATE

Cyrus Garnsey Jr.
C. W. Morris.
Jas. H. Allport
COMMITTEE
DATE: JAN. 24, 1918



LEGEND

Reported Cost ———
Adjusted Cost ━━━

Tons reported by 15 operators—357581
Tons monthly average 1916—346,194

Prepared	19 %
Run of Mine	47 %
Slack	34 %

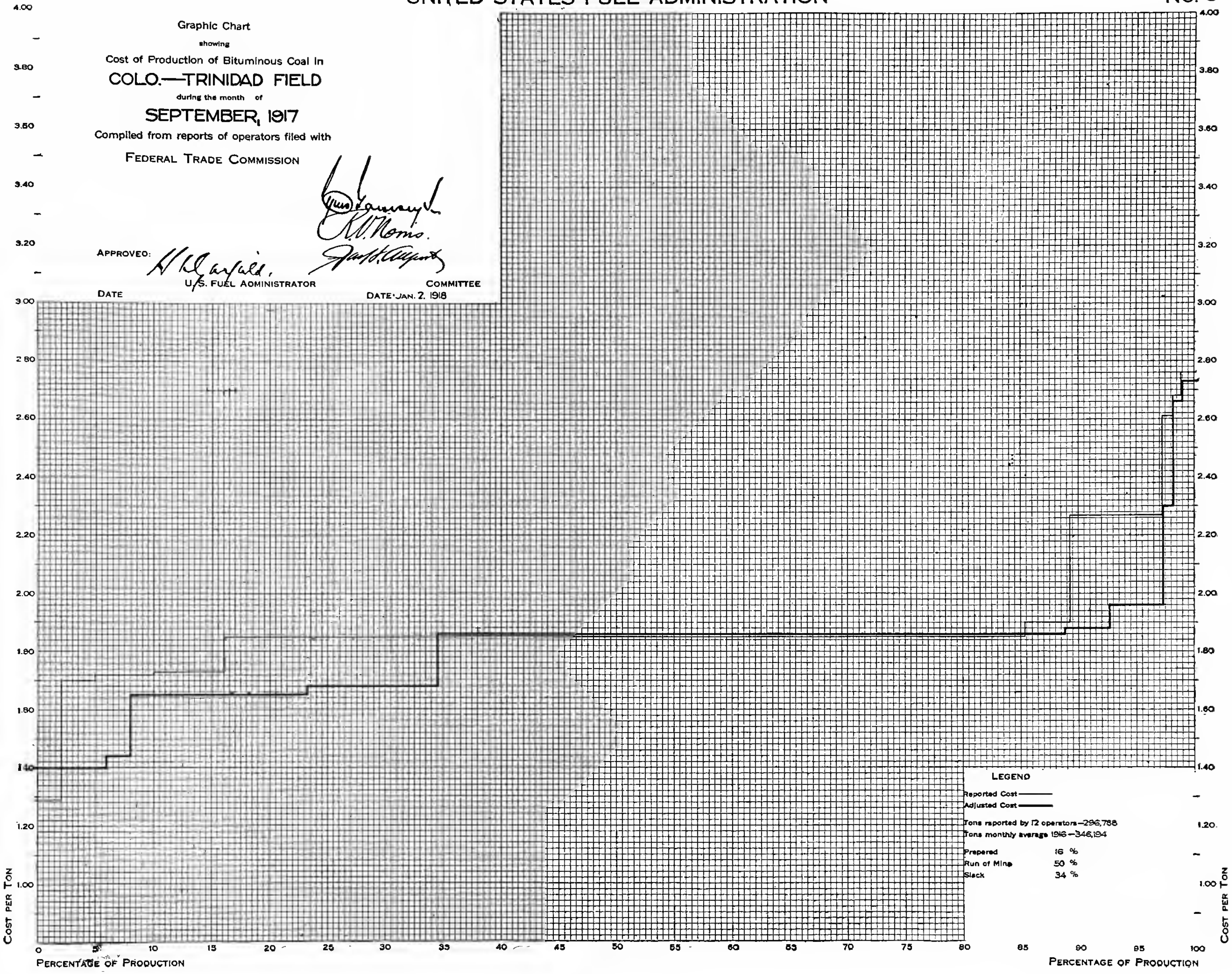
UNITED STATES FUEL ADMINISTRATION

No. 6

Graphic Chart
showing
Cost of Production of Bituminous Coal in
COLO.—TRINIDAD FIELD
during the month of
SEPTEMBER, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H A Garfield,
U. S. FUEL ADMINISTRATOR
DATE

R.V. Norris.
COMMITTEE
DATE JAN. 2, 1918



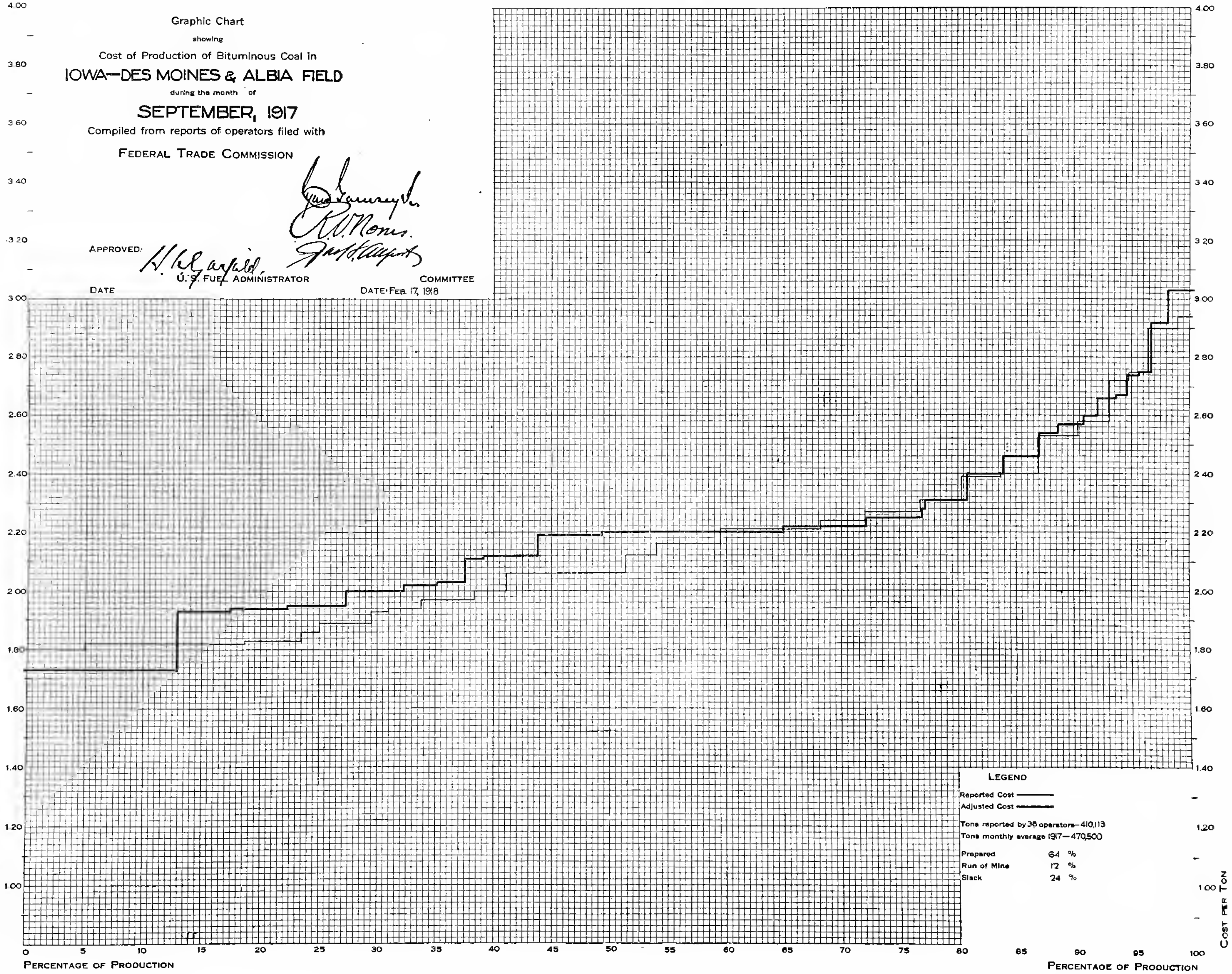
UNITED STATES FUEL ADMINISTRATION

No. 7

Graphic Chart
showing
Cost of Production of Bituminous Coal in
IOWA—DES MOINES & ALBIA FIELD
during the month of
SEPTEMBER, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

Cyrus Garnsey Jr.
R.V. Norris.
Jas. H. Allport
COMMITTEE
DATE: FEB. 17, 1918

APPROVED: H. A. Garfield
U.S. FUEL ADMINISTRATOR
DATE



Tons reported by 38 operators—410,113
Tons monthly average 1917—470,500

Prepared 64 %
Run of Mine 12 %
Slack 24 %

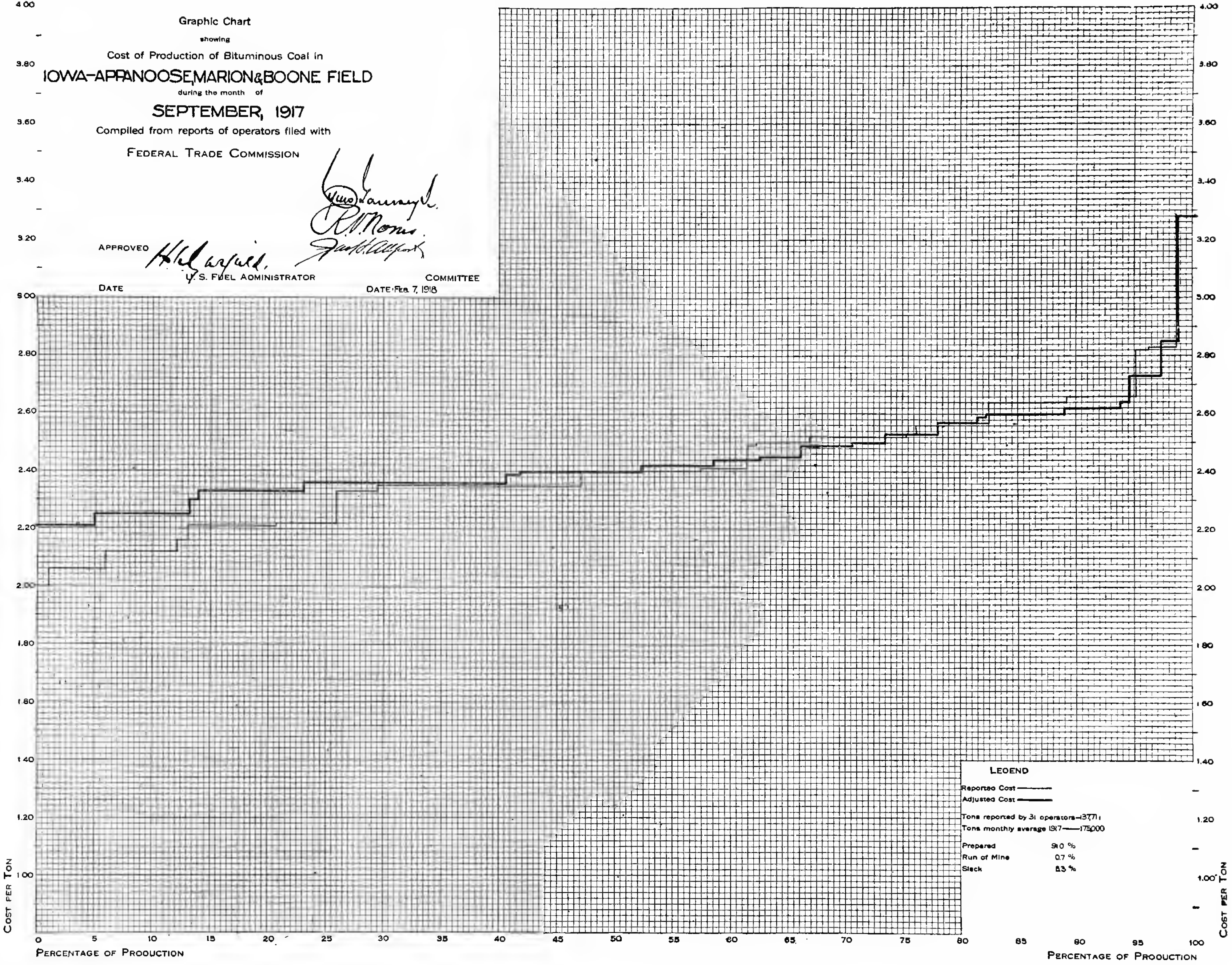
UNITED STATES FUEL ADMINISTRATION

No 8

Graphic Chart
showing
Cost of Production of Bituminous Coal in
IOWA-APPANOOSE, MARION & BOONE FIELD
during the month of
SEPTEMBER, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED H. A. Garfield
U. S. FUEL ADMINISTRATOR
DATE

Cyrus Garnsey Jr.
R. V. Norris
J. H. Allport
COMMITTEE
DATE: FEB. 7, 1918



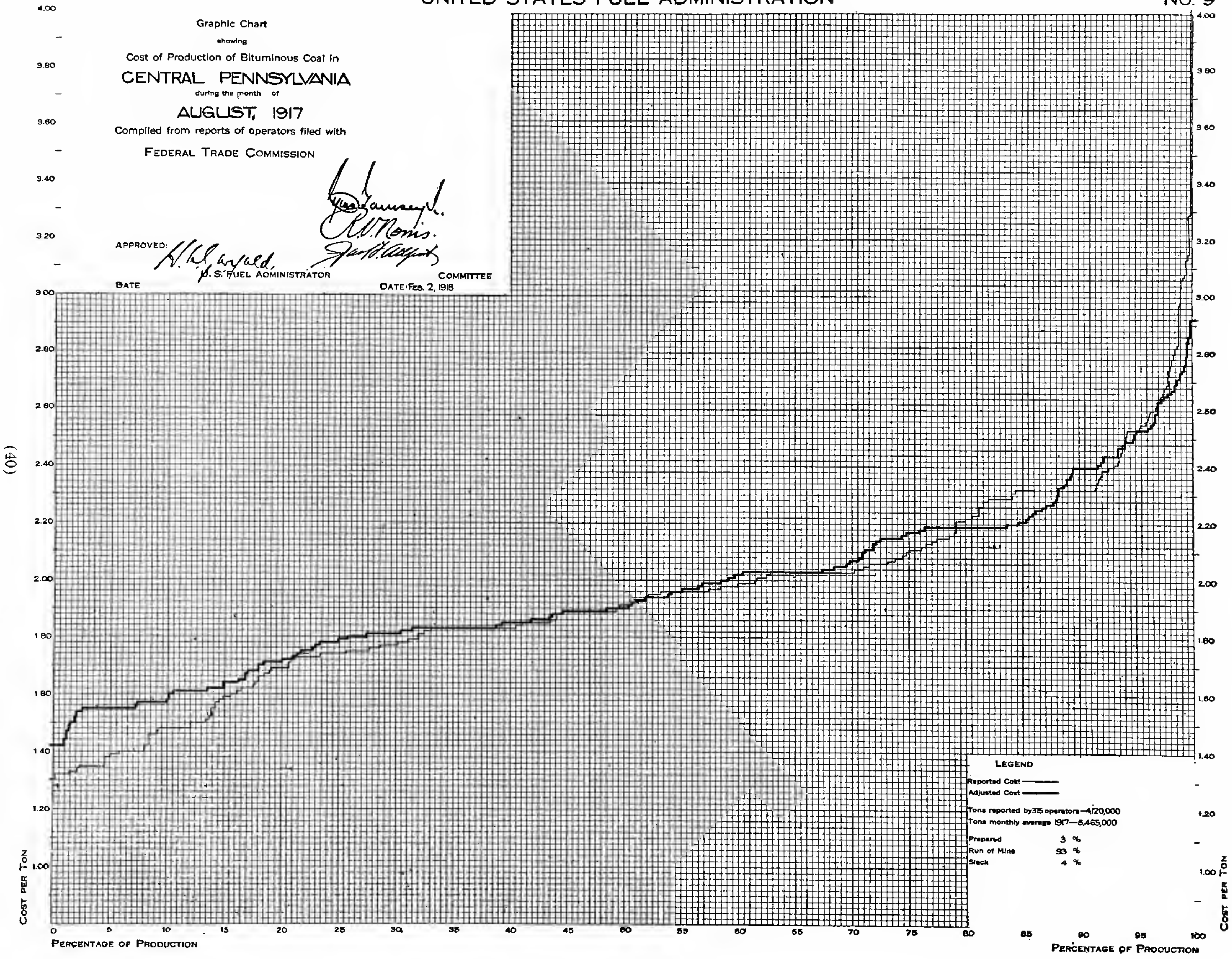
UNITED STATES FUEL ADMINISTRATION

No. 9

Graphic Chart
showing
Cost of Production of Bituminous Coal in
CENTRAL PENNSYLVANIA
during the month of
AUGUST, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield,
U. S. FUEL ADMINISTRATOR
DATE

R. V. Norris.
Jas. H. Allport
COMMITTEE
DATE: Feb. 2, 1918



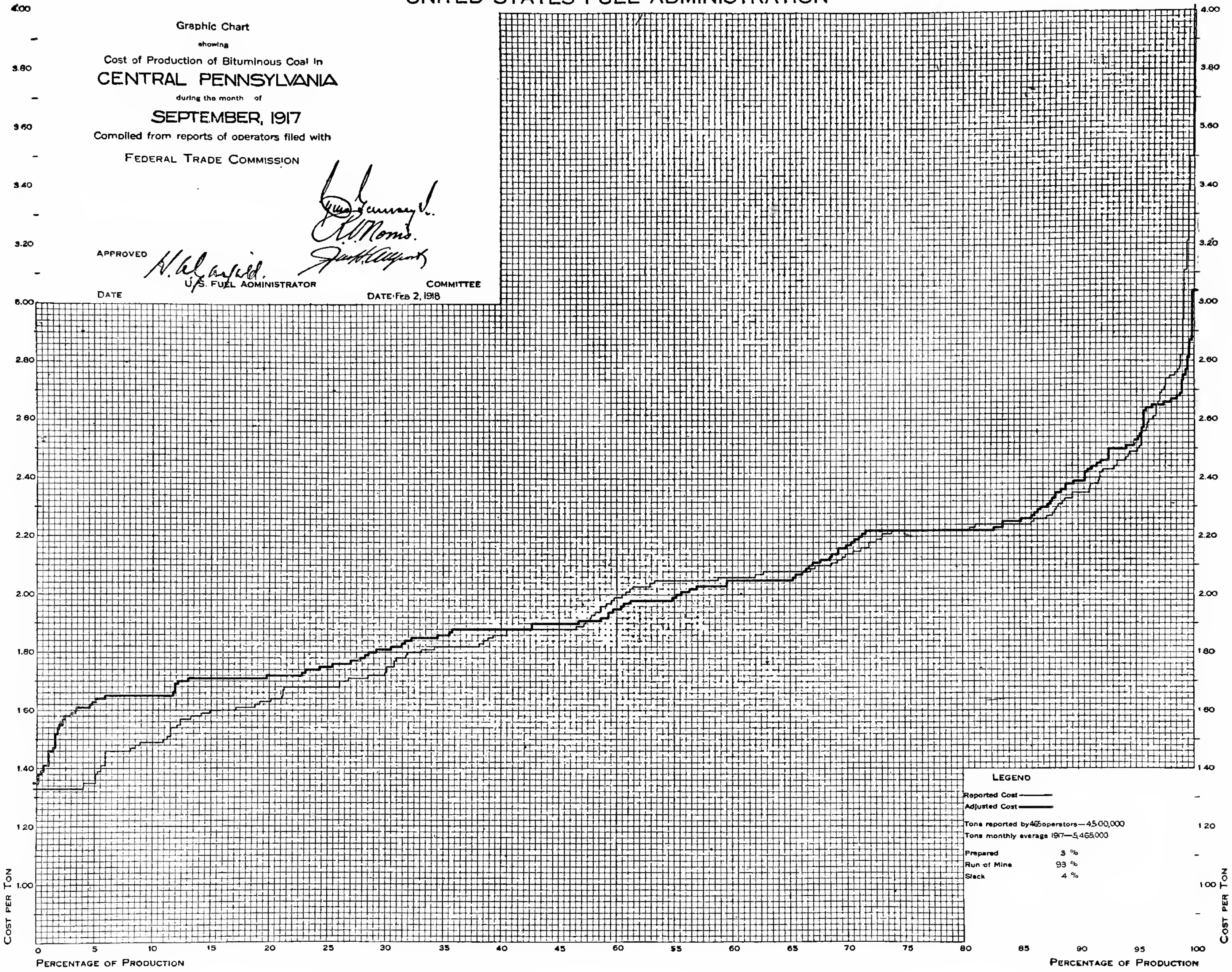
UNITED STATES FUEL ADMINISTRATION

No. 10

Graphic Chart
showing
Cost of Production of Bituminous Coal in
CENTRAL PENNSYLVANIA
during the month of
SEPTEMBER, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED H. A. Garfield.
U.S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE: FEB 2, 1918



Tons reported by 465 operators—4,500,000
Tons monthly average 1917—5,465,000

Prepared	3 %
Run of Mine	93 %
Slack	4 %

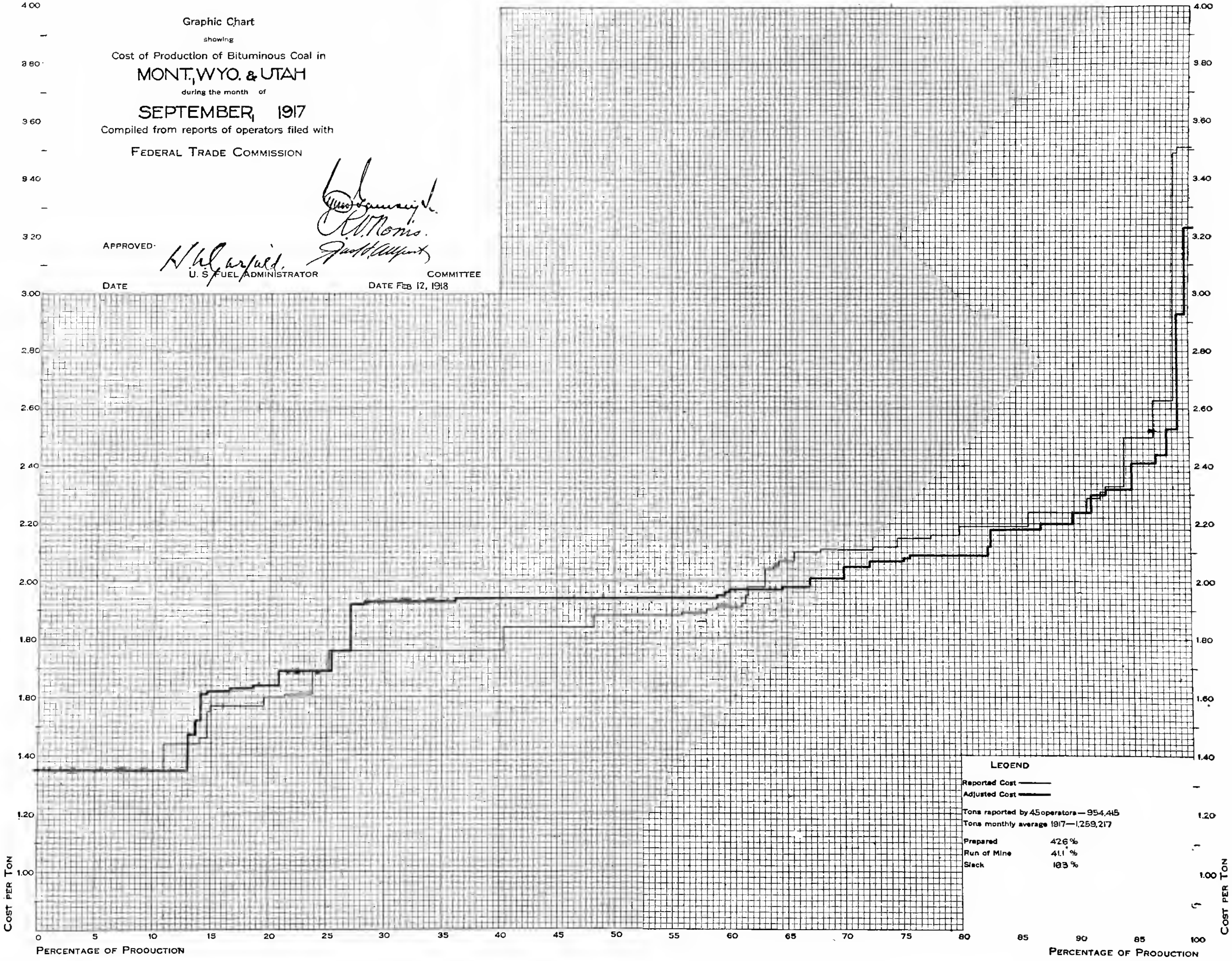
UNITED STATES FUEL ADMINISTRATION

NO. 11

Graphic Chart
showing
Cost of Production of Bituminous Coal in
MONT., WYO. & UTAH
during the month of
SEPTEMBER, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED· H. A. Garfield.
U. S. FUEL ADMINISTRATOR
DATE

R. V. Norris.
Jno. H. Allport
COMMITTEE
DATE FEB 12, 1918



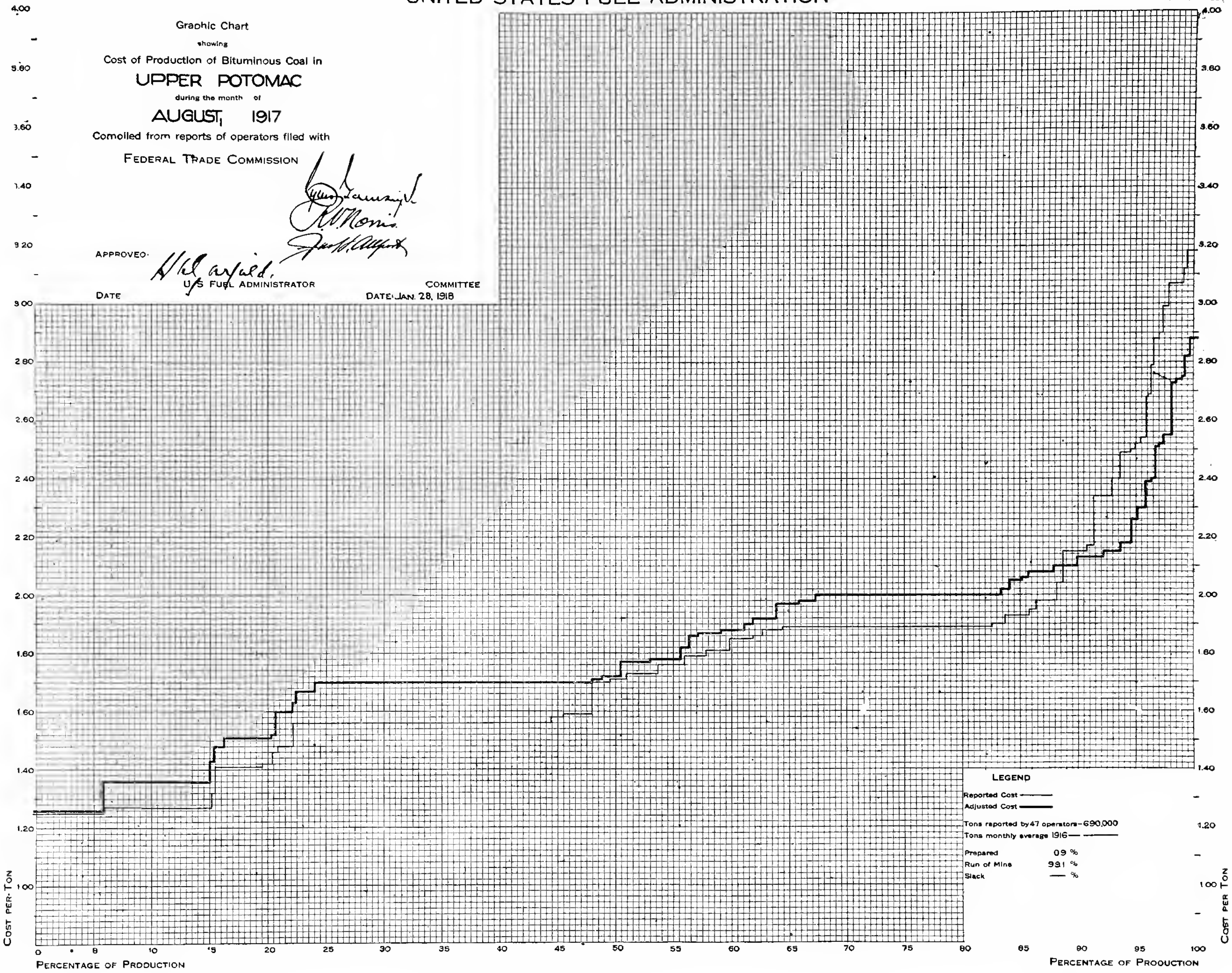
UNITED STATES FUEL ADMINISTRATION

No. 12

Graphic Chart
showing
Cost of Production of Bituminous Coal in
UPPER POTOMAC
during the month of
AUGUST, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR
DATE

Cyrus Garnsey Jr
R. V. Norris
COMMITTEE
DATE: JAN. 28, 1918



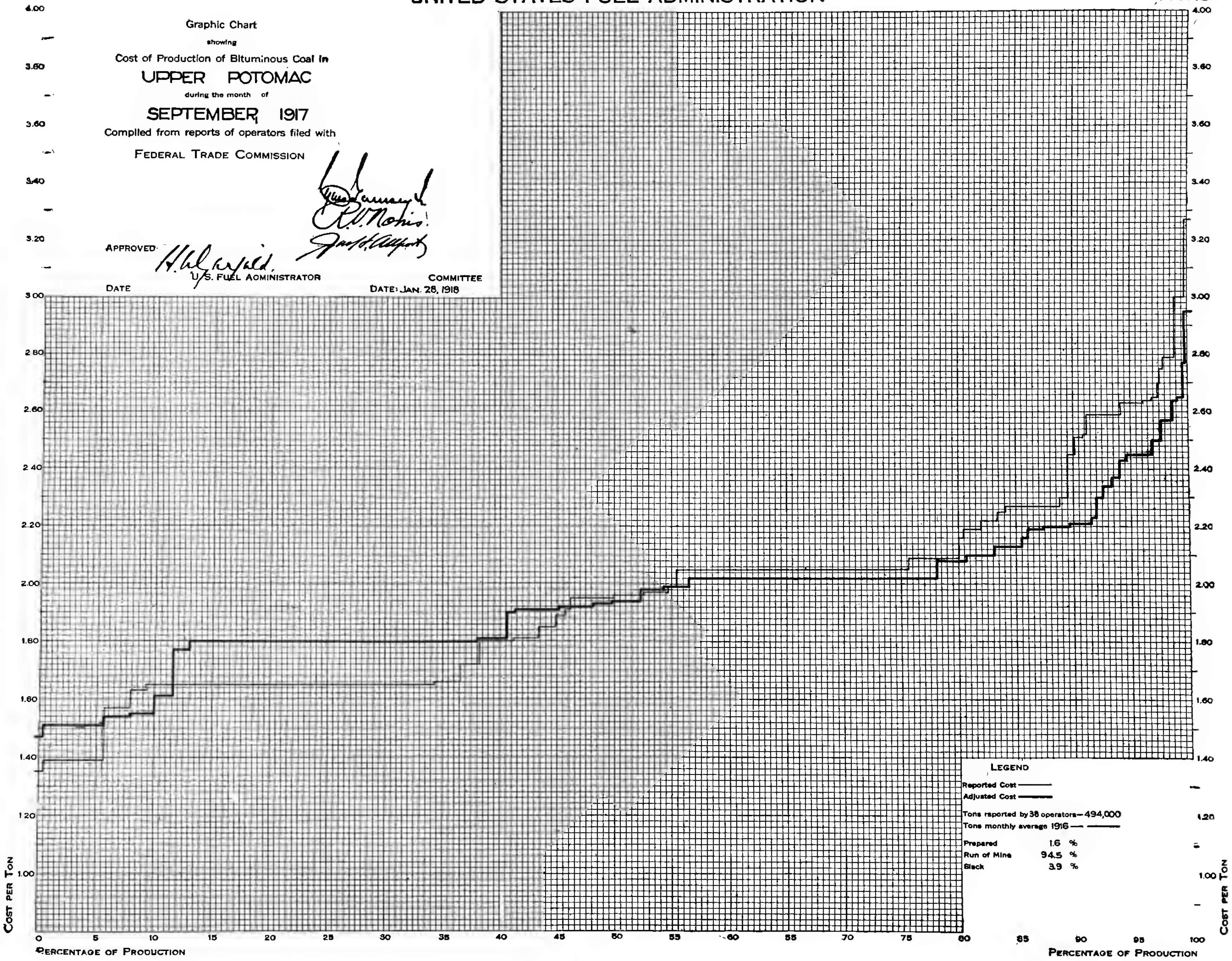
UNITED STATES FUEL ADMINISTRATION

No. 13

Graphic Chart
showing
Cost of Production of Bituminous Coal in
UPPER POTOMAC
during the month of
SEPTEMBER 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED H. A. Garfield.
U. S. FUEL ADMINISTRATOR
DATE

R. V. Norris
Jas. H. Allport
COMMITTEE
DATE: JAN. 28, 1918



UNITED STATES FUEL ADMINISTRATION

No. 14

Graphic Chart

showing

Cost of Production of Bituminous Coal in

W. VA.—TUG RIVER DIST.

during the month of

AUGUST, 1917

Compiled from reports of operators filed with

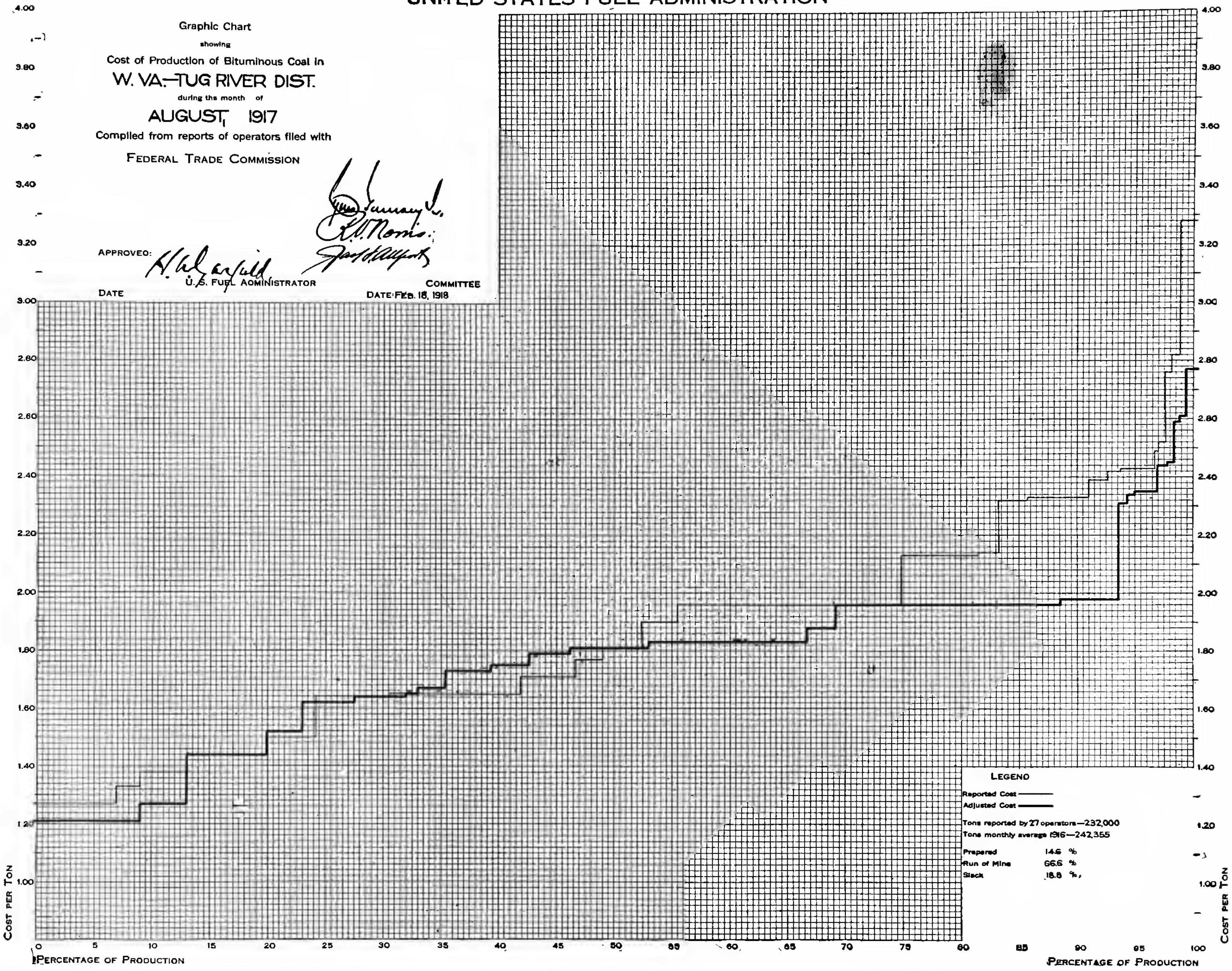
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield
U. S. FUEL ADMINISTRATOR

DATE

R. V. Norris
Jas. H. Allport
COMMITTEE

DATE: FEB. 18, 1918



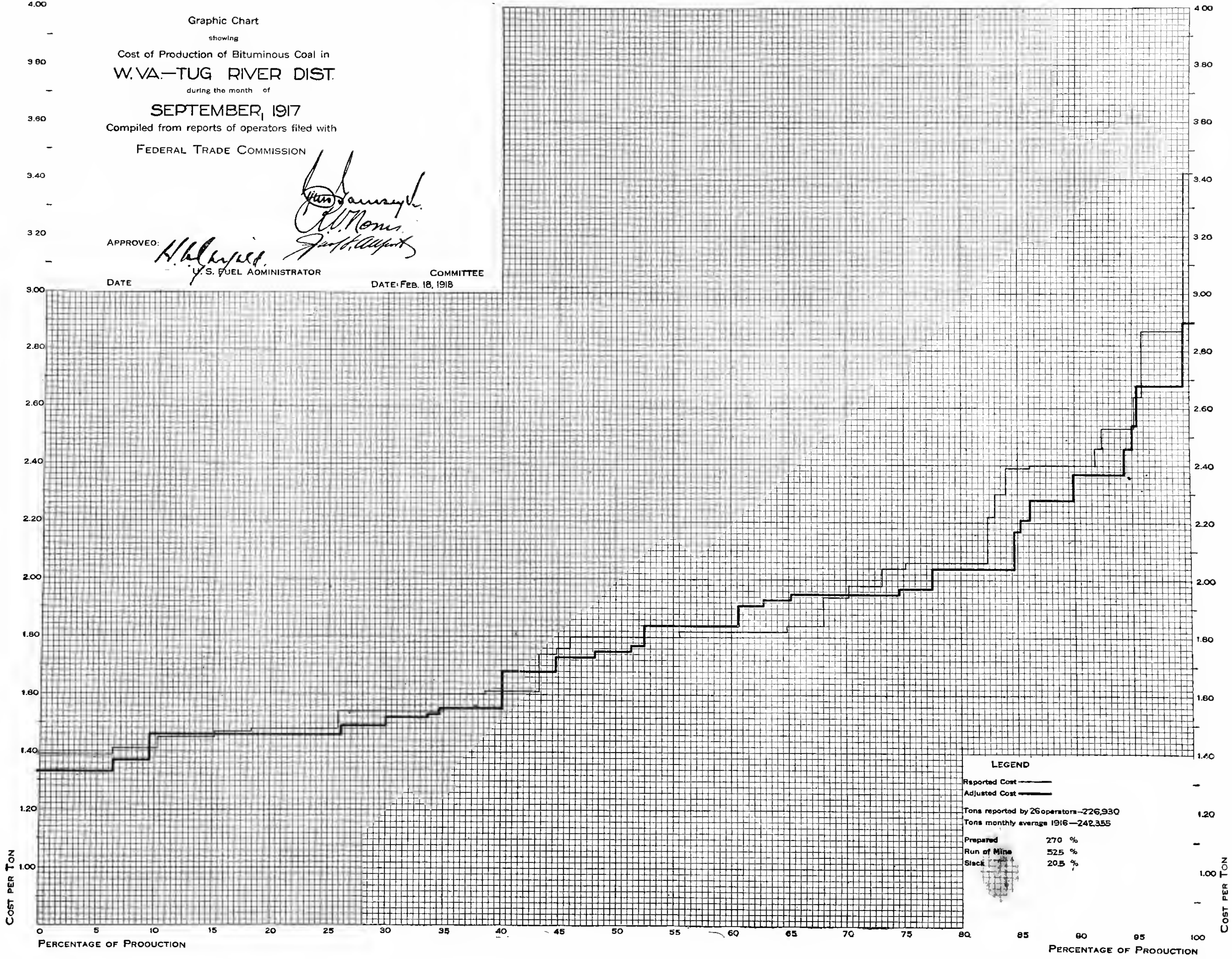
UNITED STATES FUEL ADMINISTRATION

No. 15

Graphic Chart
showing
Cost of Production of Bituminous Coal in
W. VA.—TUG RIVER DIST.
during the month of
SEPTEMBER, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield
U. S. FUEL ADMINISTRATOR
DATE

Wm. Ramsey Jr.
C. W. Morris
Jos. H. Allport
COMMITTEE
DATE: FEB. 18, 1918



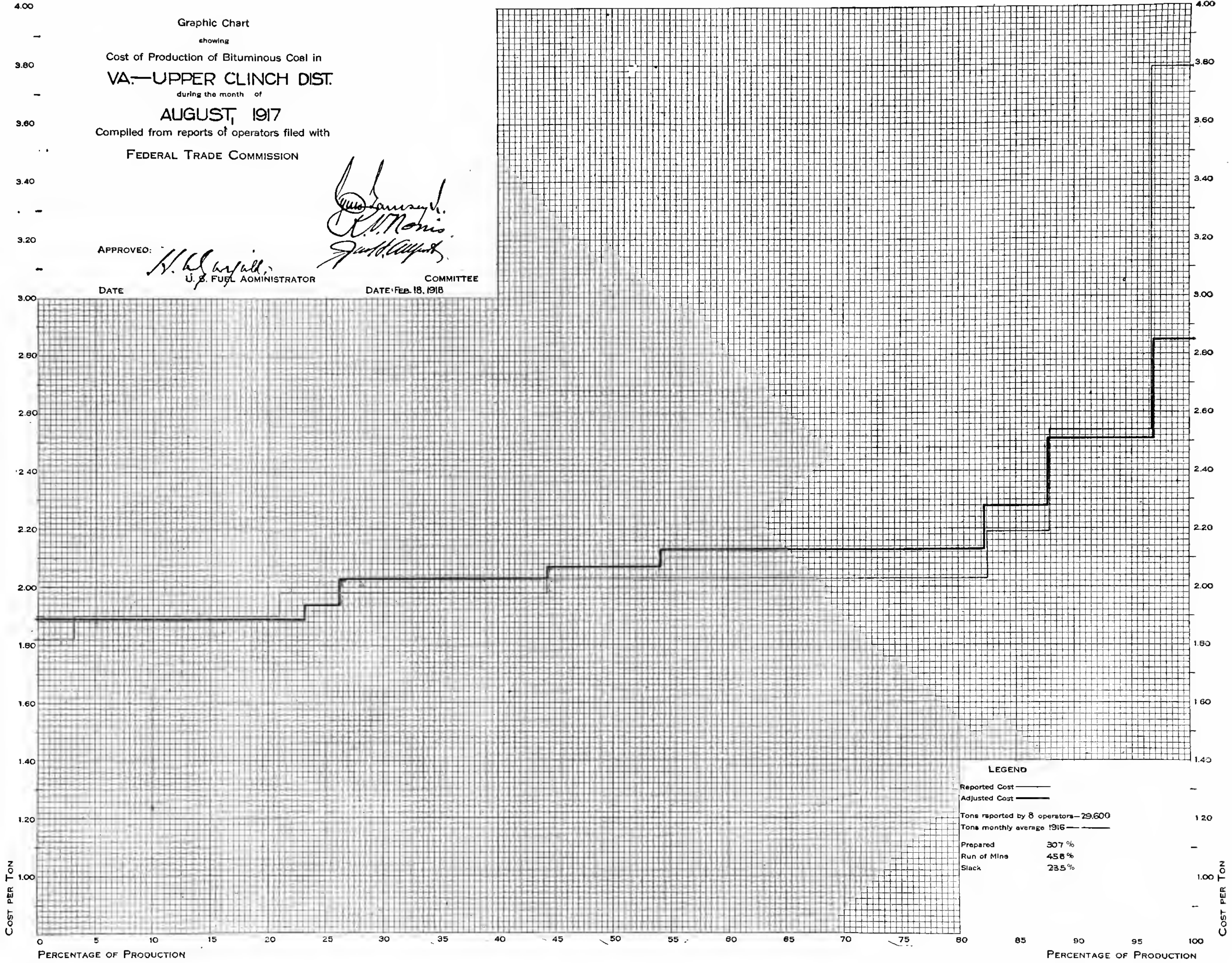
UNITED STATES FUEL ADMINISTRATION

No. 16

Graphic Chart
showing
Cost of Production of Bituminous Coal in
VA.—UPPER CLINCH DIST.
during the month of
AUGUST, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

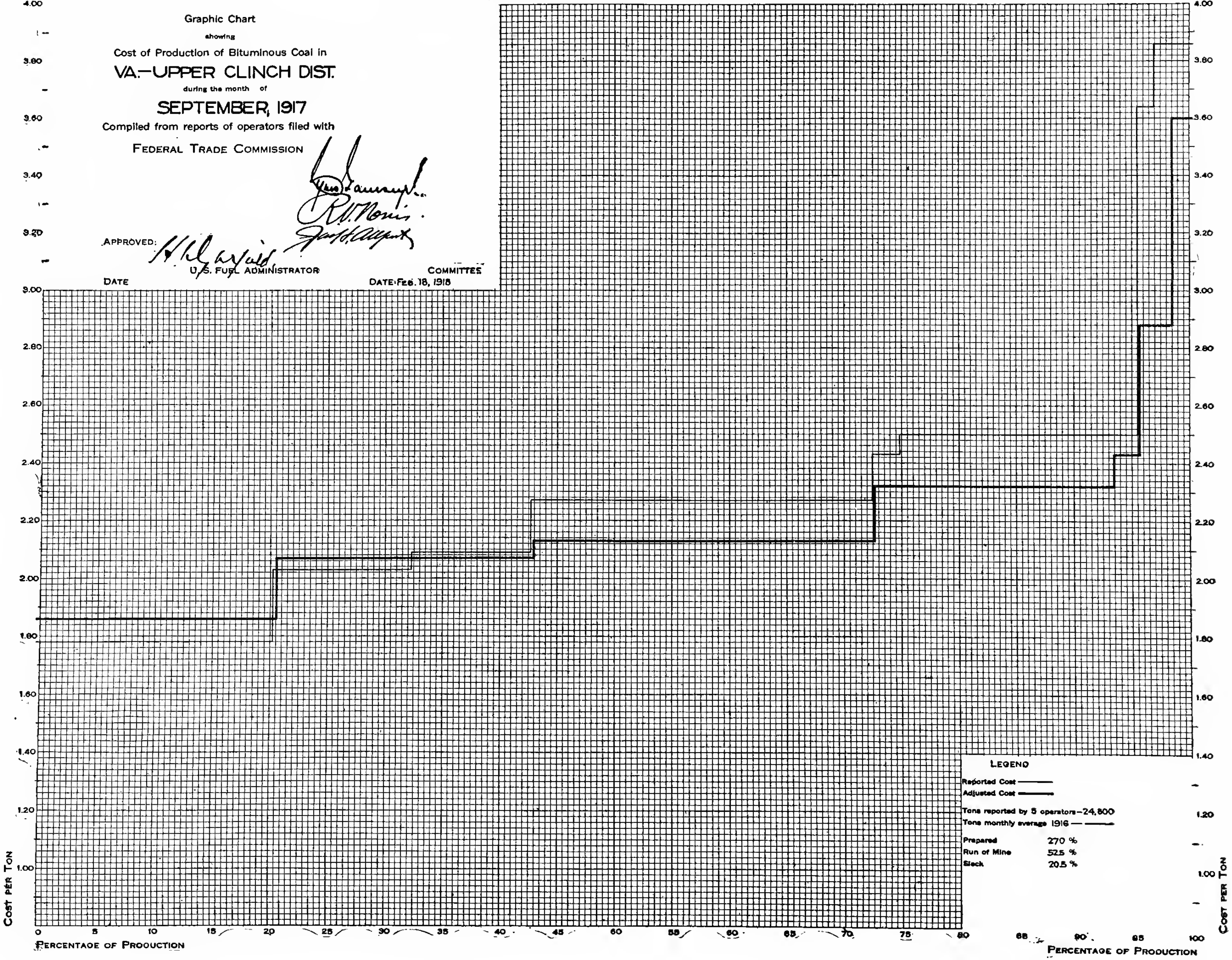
APPROVED: H. A. Garfield
U. S. FUEL ADMINISTRATOR
DATE

R. V. Norris
COMMITTEE
DATE: FEB. 18, 1918



UNITED STATES FUEL ADMINISTRATION

No. 17



Graphic Chart
showing
Cost of Production of Bituminous Coal in
VA.–UPPER CLINCH DIST.
during the month of
SEPTEMBER, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

R. V. Norris

APPROVED: H. A. Garfield
U. S. FUEL ADMINISTRATOR

DATE

COMMITTEES
DATE: FEB. 18, 1918

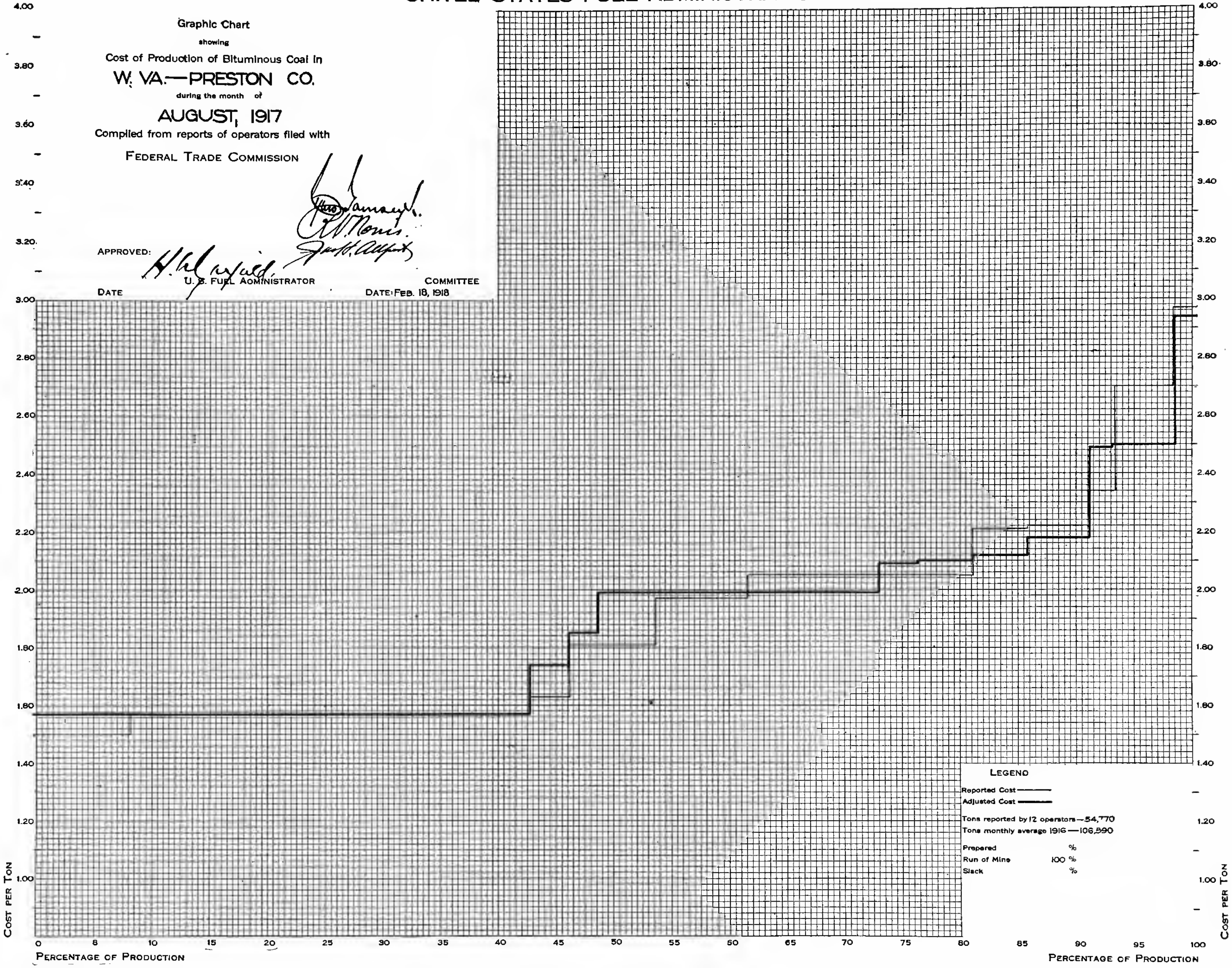
UNITED STATES FUEL ADMINISTRATION

No. 18

Graphic Chart
showing
Cost of Production of Bituminous Coal in
W. VA.—PRESTON CO.
during the month of
AUGUST, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield
U. S. FUEL ADMINISTRATOR
DATE

R. V. Norris.
Jas. H. Allport
COMMITTEE
DATE: FEB. 18, 1918



LEGEND
Reported Cost ———
Adjusted Cost ▬▬▬
Tons reported by 12 operators—54,770
Tons monthly average 1916—106,990
Prepared %
Run of Mine 100 %
Slack %

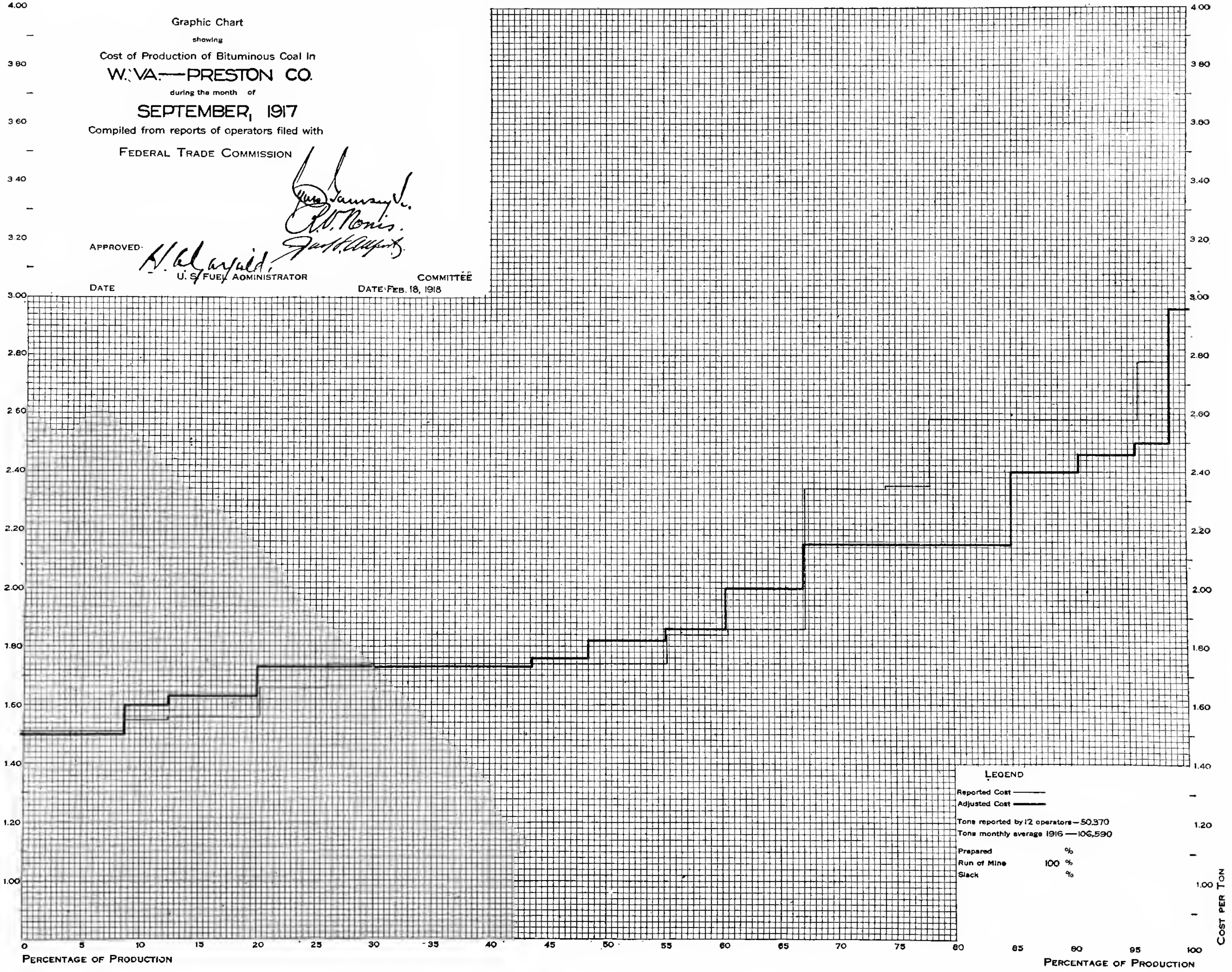
UNITED STATES FUEL ADMINISTRATION

No. 19

Graphic Chart
showing
Cost of Production of Bituminous Coal In
W. VA.—PRESTON CO.
during the month of
SEPTEMBER, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED· H. A. Garfield,
U. S. FUEL ADMINISTRATOR
DATE

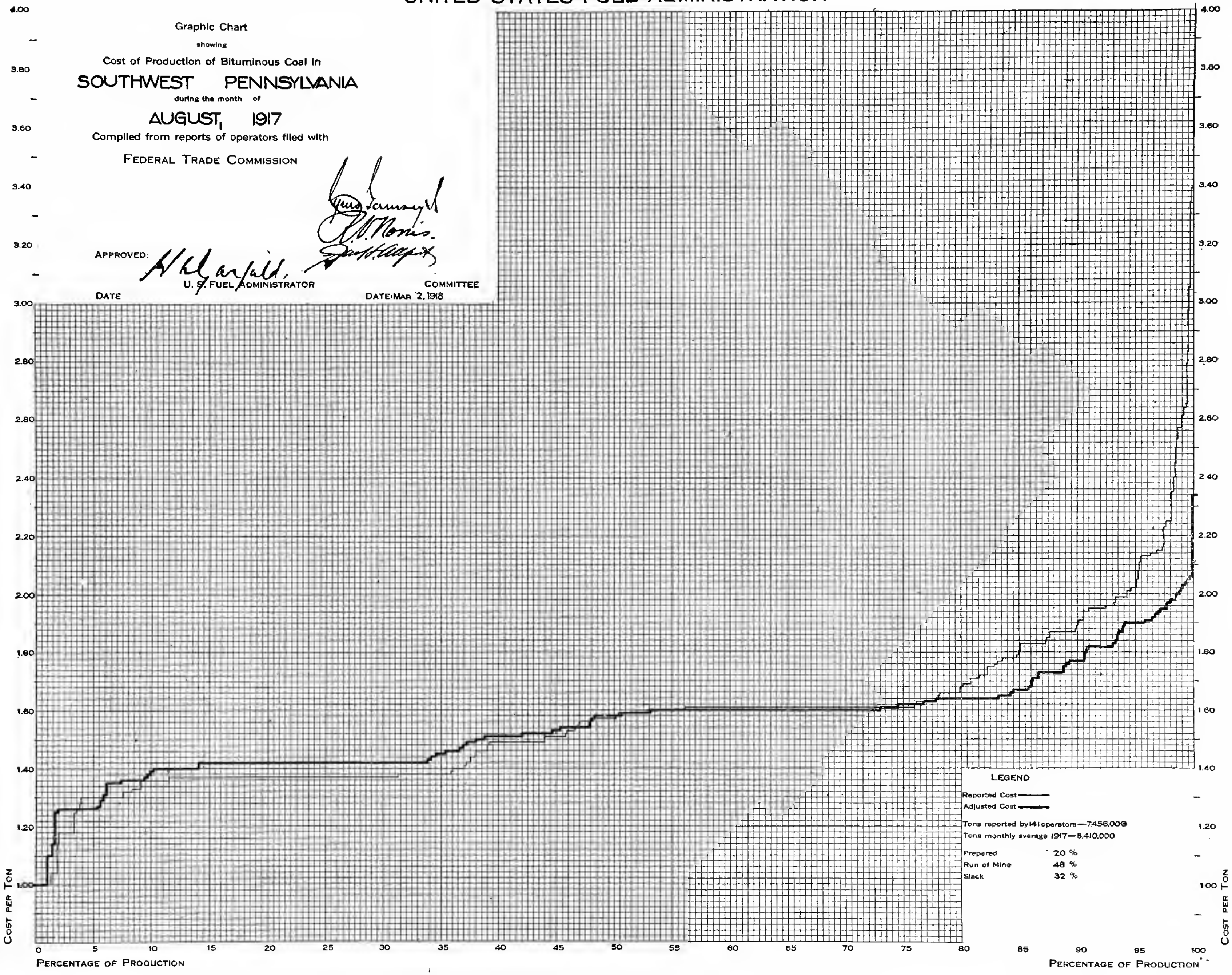
R. V. Norris.
COMMITTEE
DATE: FEB. 18, 1918



LEGEND
Reported Cost ———
Adjusted Cost ▬▬▬
Tons reported by 12 operators—50,370
Tons monthly average 1916—106,590
Prepared %
Run of Mine 100 %
Slack %

UNITED STATES FUEL ADMINISTRATION

No. 20



Graphic Chart
showing
Cost of Production of Bituminous Coal in
SOUTHWEST PENNSYLVANIA
during the month of
AUGUST, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H A Garfield,
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE: MAR 2, 1918

UNITED STATES FUEL ADMINISTRATION

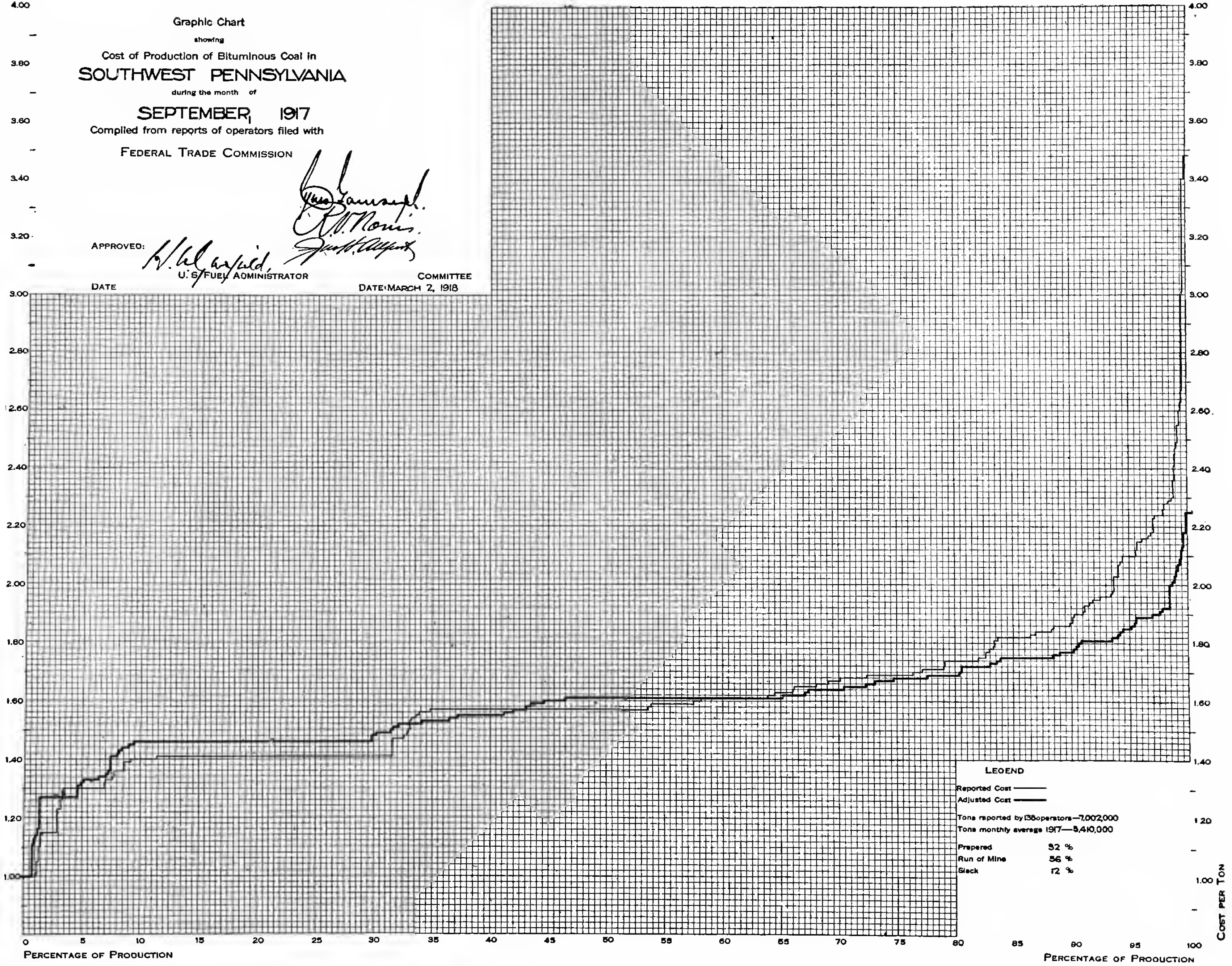
No. 21

Graphic Chart
showing
Cost of Production of Bituminous Coal in
SOUTHWEST PENNSYLVANIA
during the month of
SEPTEMBER, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

R. V. Norris.

APPROVED: H. A. Garfield,
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE: MARCH 2, 1918



Tons reported by 138 operators—7,002,000
Tons monthly average 1917—5,410,000

Prepared	32 %
Run of Mine	56 %
Slack	12 %

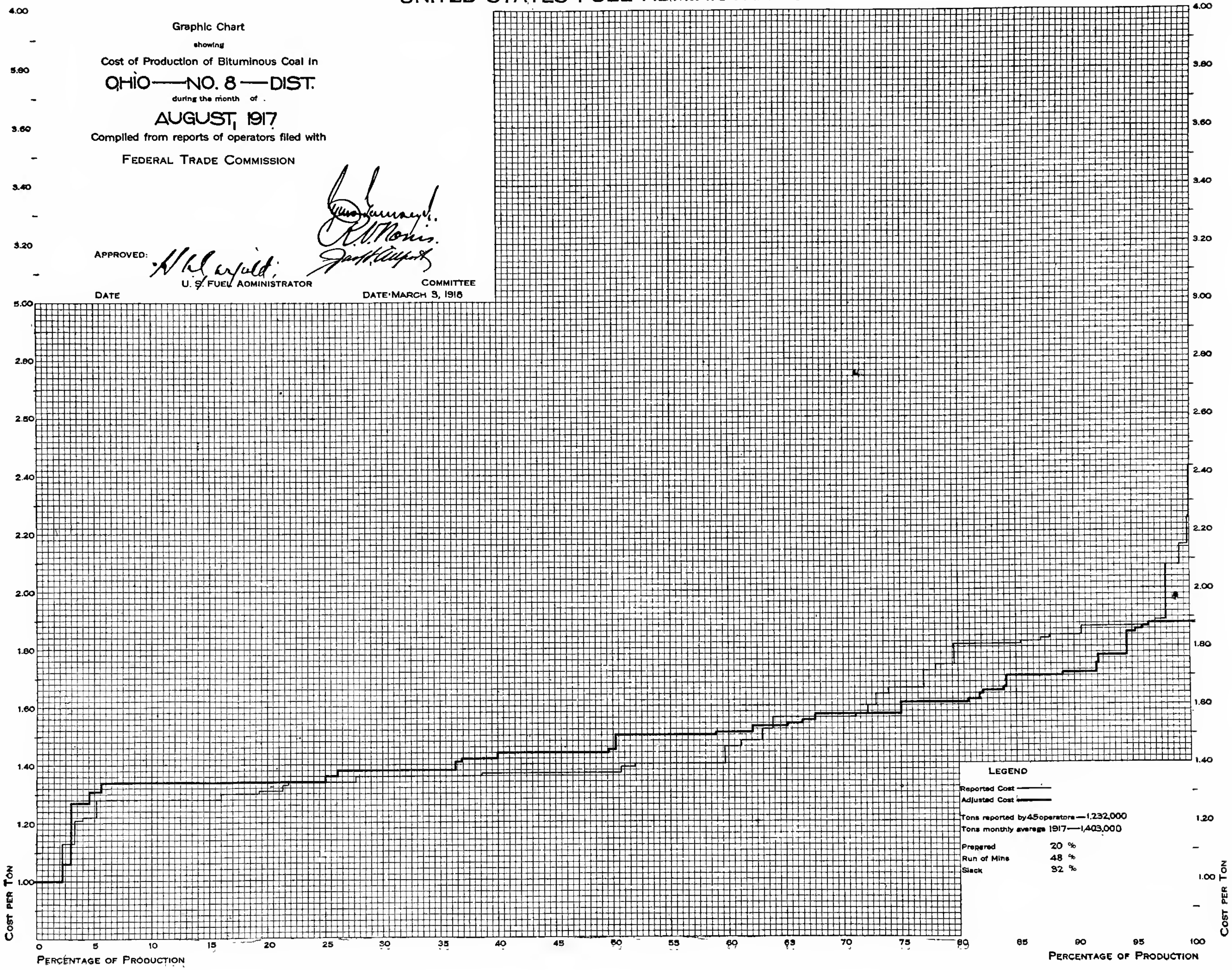
UNITED STATES FUEL ADMINISTRATION

No. 22

Graphic Chart
showing
Cost of Production of Bituminous Coal in
OHIO——NO. 8——DIST.
during the month of
AUGUST, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield
U. S. FUEL ADMINISTRATOR
DATE

R. V. Norris
Jas. H. Allport
COMMITTEE
DATE: MARCH 3, 1918



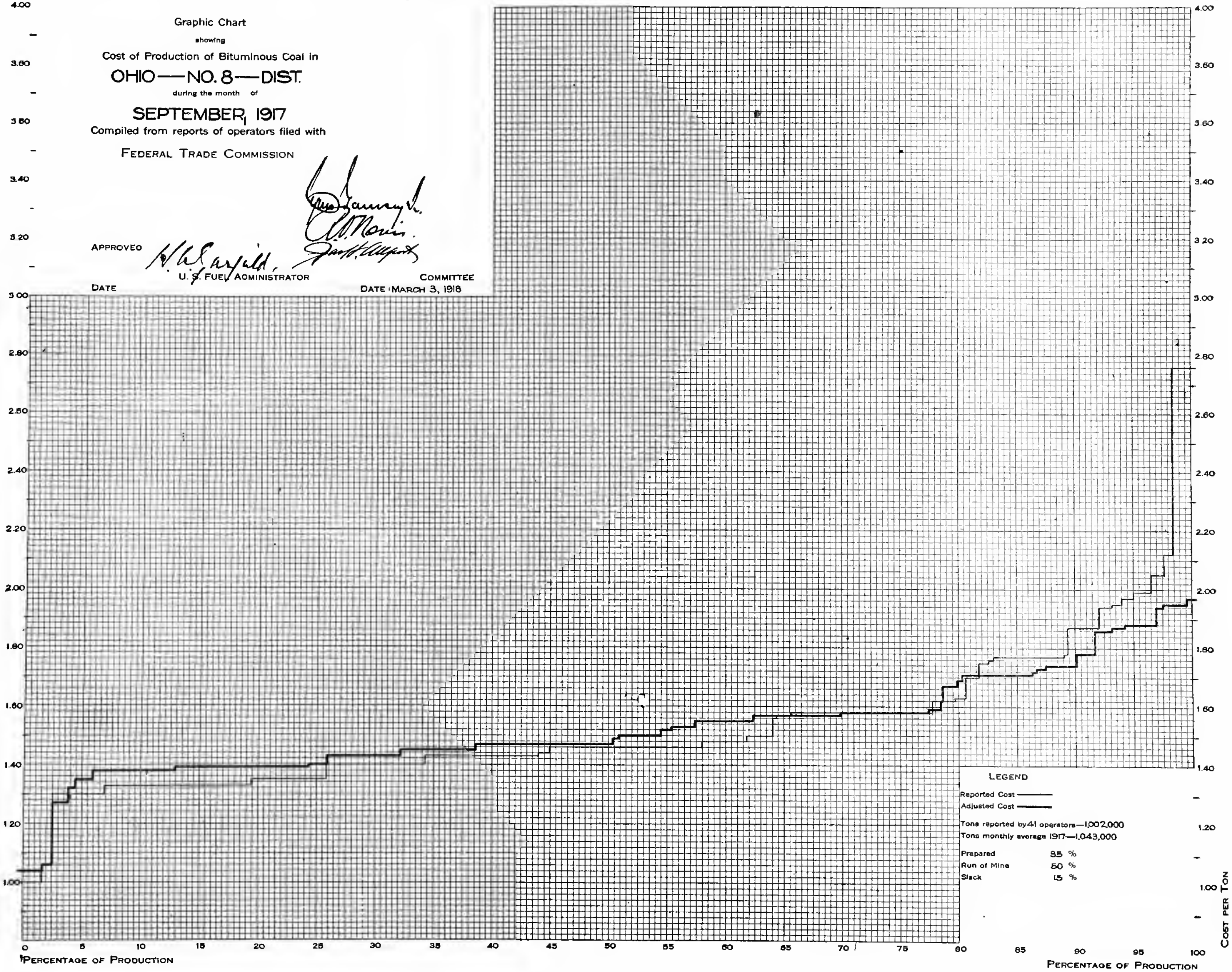
UNITED STATES FUEL ADMINISTRATION

No. 23

Graphic Chart
showing
Cost of Production of Bituminous Coal in
OHIO — NO. 8 — DIST.
during the month of
SEPTEMBER, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED H. A. Garfield
U. S. FUEL ADMINISTRATOR
DATE

Jas. H. Allport
COMMITTEE
DATE MARCH 3, 1918



Tons reported by 41 operators—1,002,000
Tons monthly average 1917—1,043,000

Prepared	35 %
Run of Mine	50 %
Slack	15 %

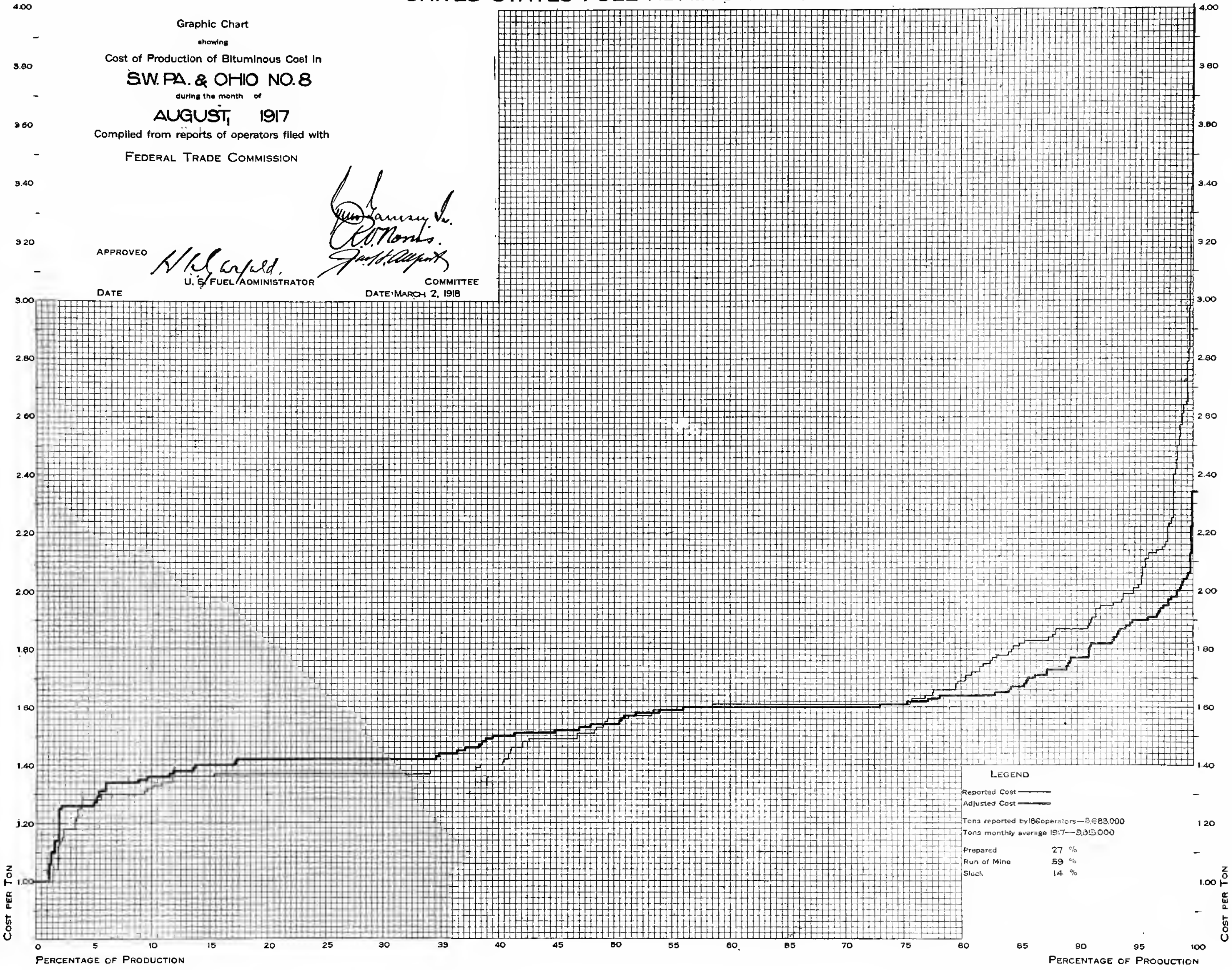
UNITED STATES FUEL ADMINISTRATION

No. 24

Graphic Chart
showing
Cost of Production of Bituminous Coal in
SW. PA. & OHIO NO. 8
during the month of
AUGUST, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED H. A. Garfield.
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE: MARCH 2, 1918



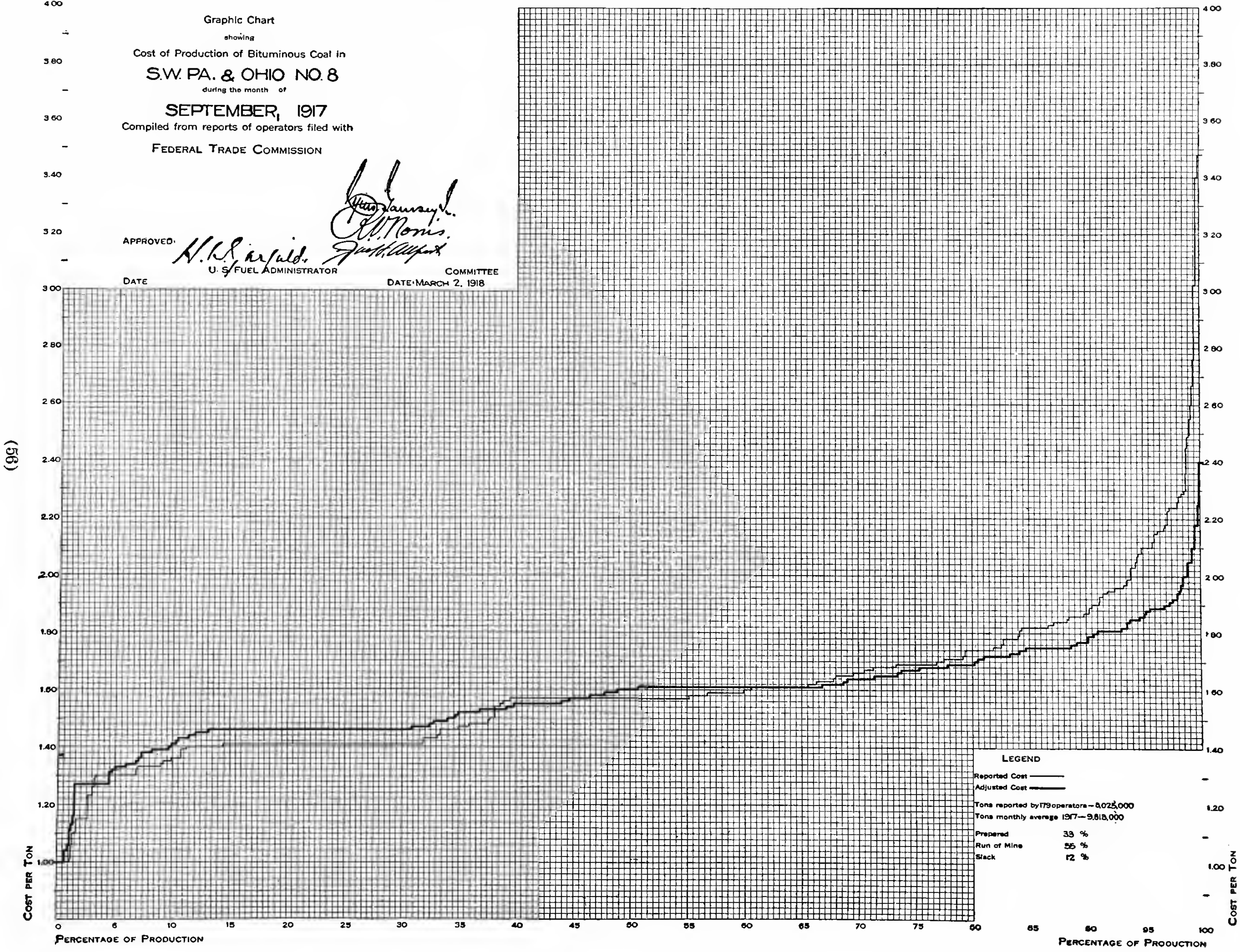
UNITED STATES FUEL ADMINISTRATION

No. 25

Graphic Chart
showing
Cost of Production of Bituminous Coal in
S.W. PA. & OHIO NO. 8
during the month of
SEPTEMBER, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE: MARCH 2, 1918



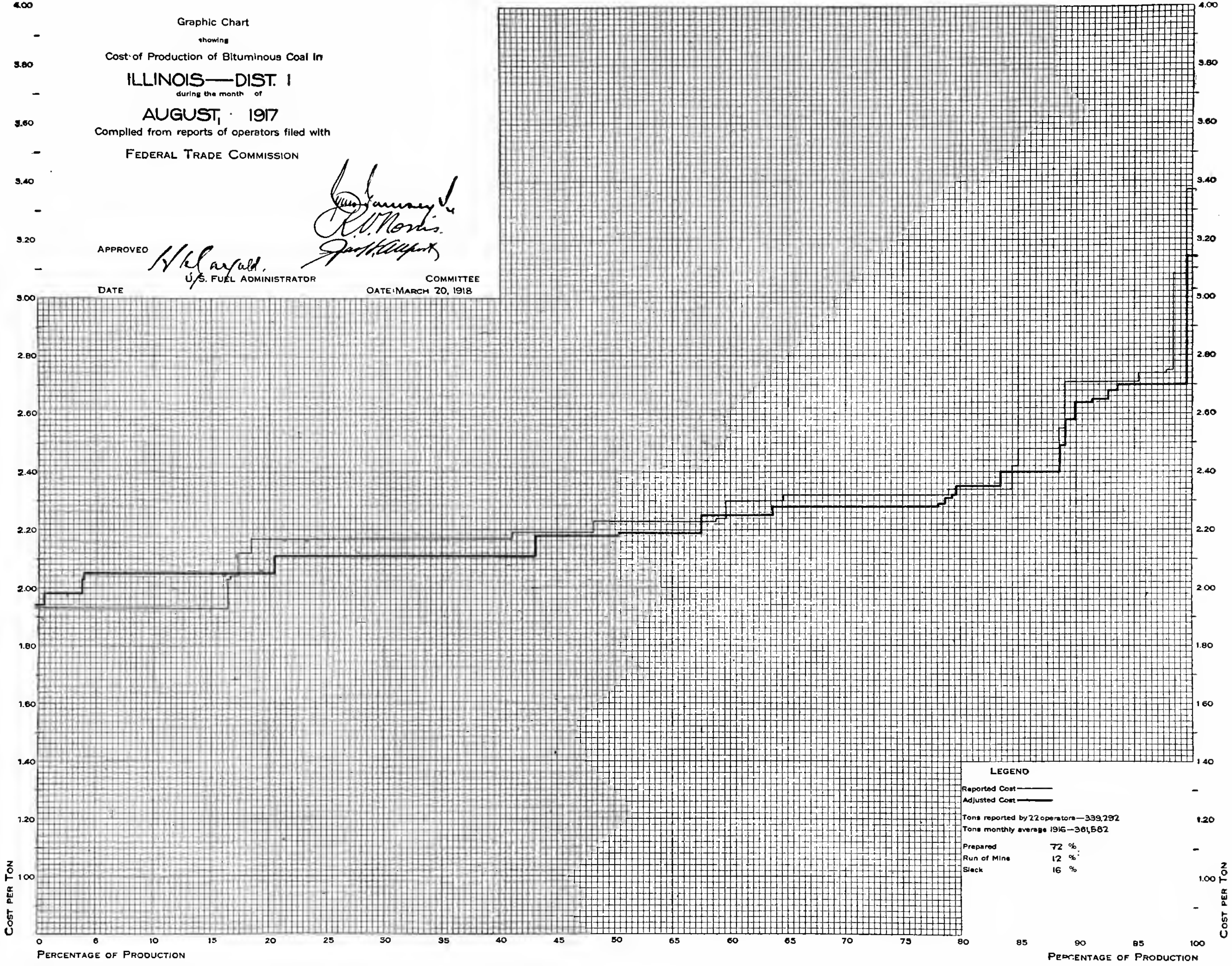
UNITED STATES FUEL ADMINISTRATION

No. 26

Graphic Chart
showing
Cost of Production of Bituminous Coal in
ILLINOIS—DIST. 1
during the month of
AUGUST, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED H. A. Garfield.
U. S. FUEL ADMINISTRATOR
DATE

R. V. Norris.
Jas. H. Allport
COMMITTEE
DATE: MARCH 20, 1918



LEGEND

Reported Cost ——
Adjusted Cost ▬▬

Tons reported by 22 operators—339,292
Tons monthly average 1916—361,582

Prepared	72 %
Run of Mine	12 %
Slack	16 %

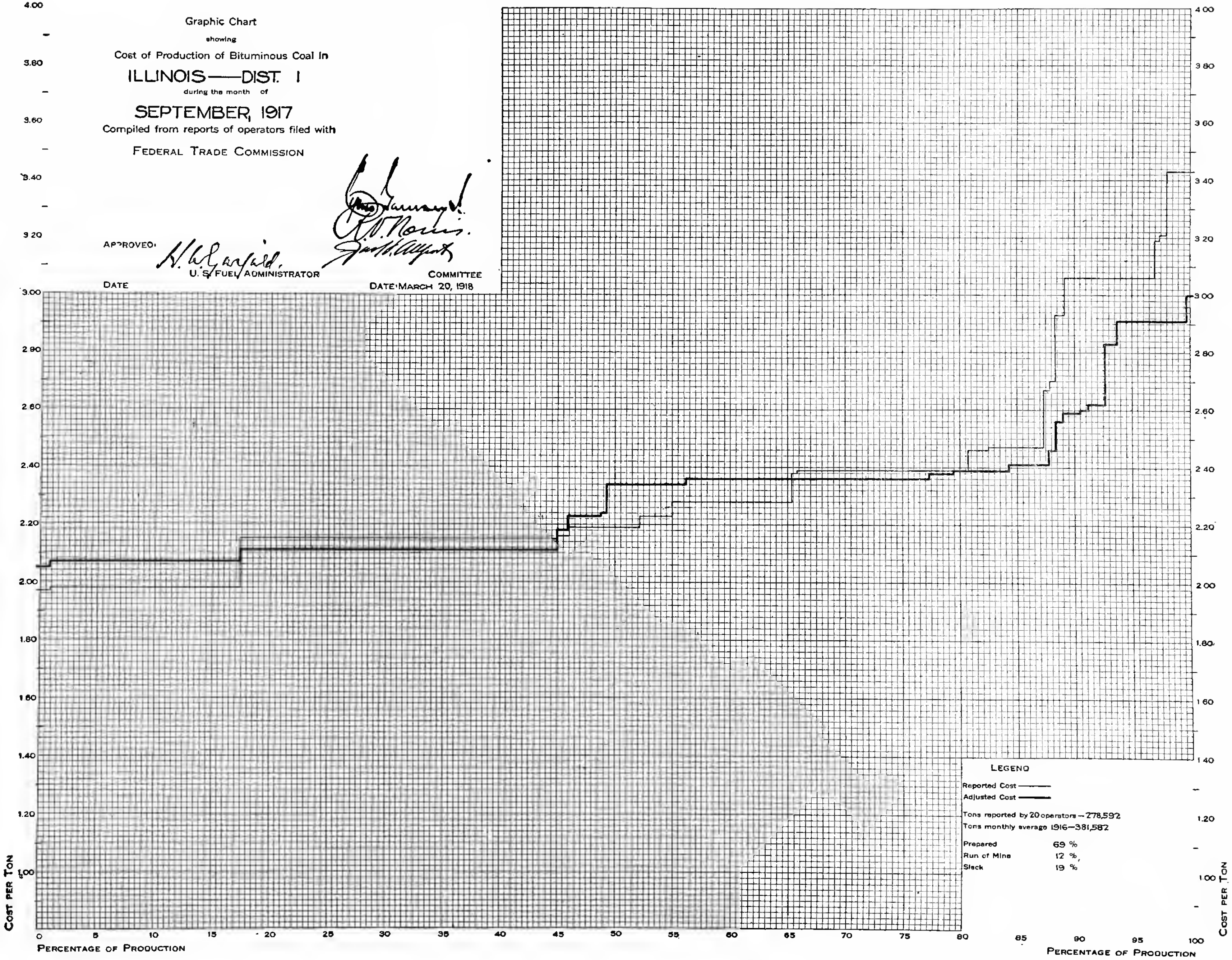
UNITED STATES FUEL ADMINISTRATION

No. 27

Graphic Chart
showing
Cost of Production of Bituminous Coal in
ILLINOIS——DIST. 1
during the month of
SEPTEMBER, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR
DATE

R. V. Norris.
Jas. H. Allport
COMMITTEE
DATE: MARCH 20, 1918

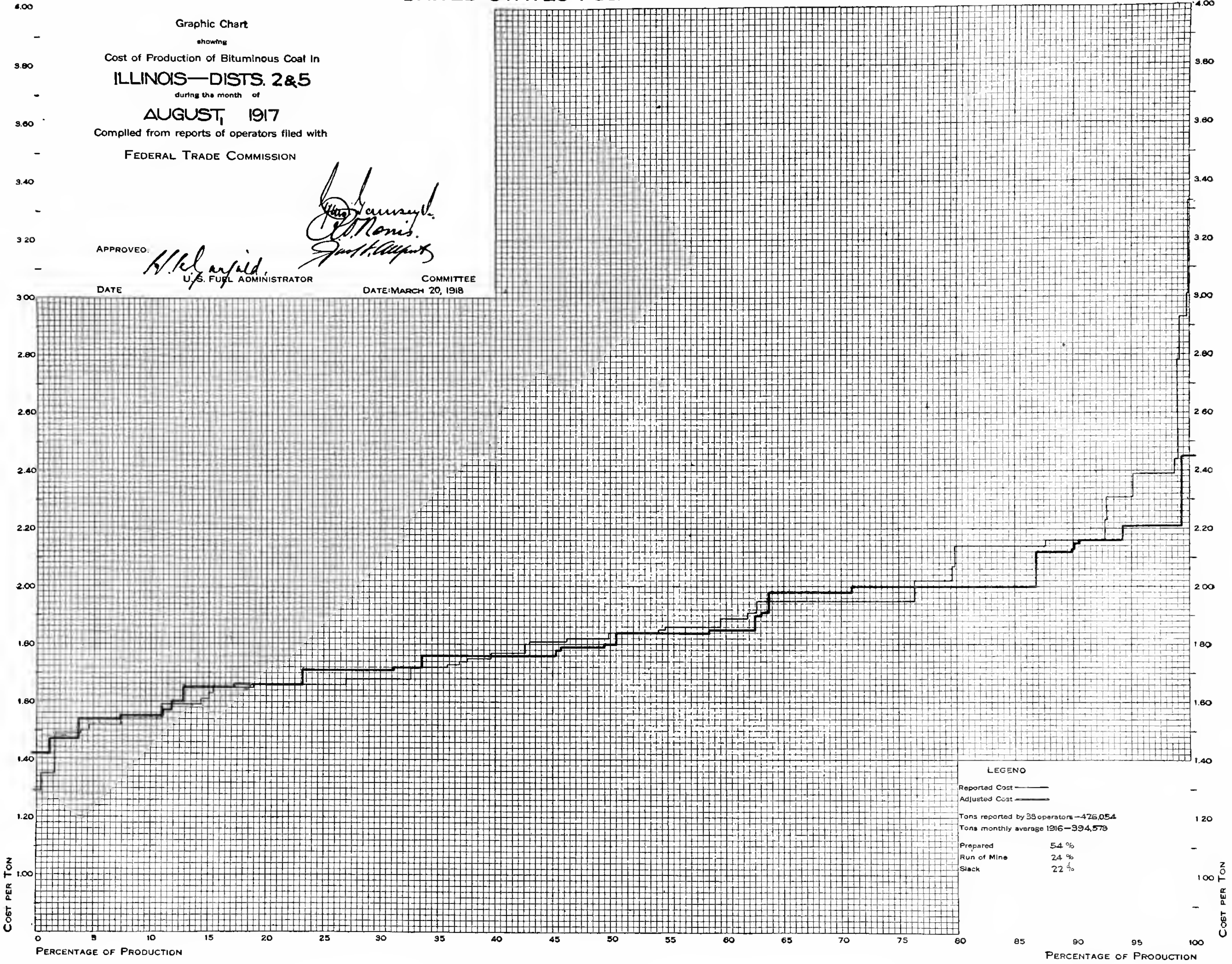


LEGEND
Reported Cost ——
Adjusted Cost ——
Tons reported by 20 operators — 278,592
Tons monthly average 1916—381,582

Prepared	69 %
Run of Mine	12 %
Slack	19 %

UNITED STATES FUEL ADMINISTRATION

No. 28



Graphic Chart
showing
Cost of Production of Bituminous Coal in
ILLINOIS—DISTS. 2&5
during the month of
AUGUST, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield,
U. S. FUEL ADMINISTRATOR

DATE

COMMITTEE

DATE: MARCH 20, 1918

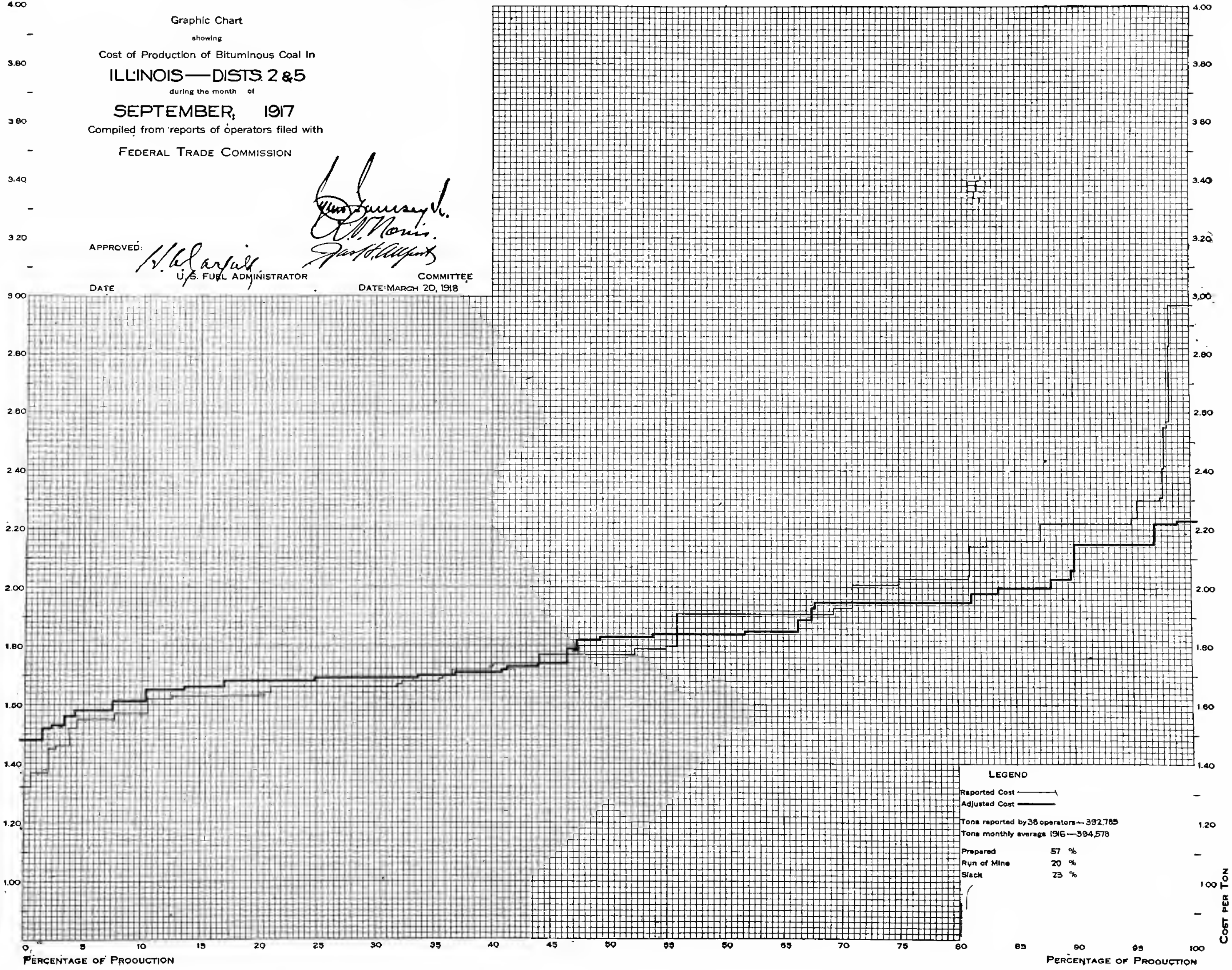
UNITED STATES FUEL ADMINISTRATION

No.29

Graphic Chart
showing
Cost of Production of Bituminous Coal in
ILLINOIS—DISTS. 2 & 5
during the month of
SEPTEMBER, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield
U.S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE: MARCH 20, 1918



UNITED STATES FUEL ADMINISTRATION

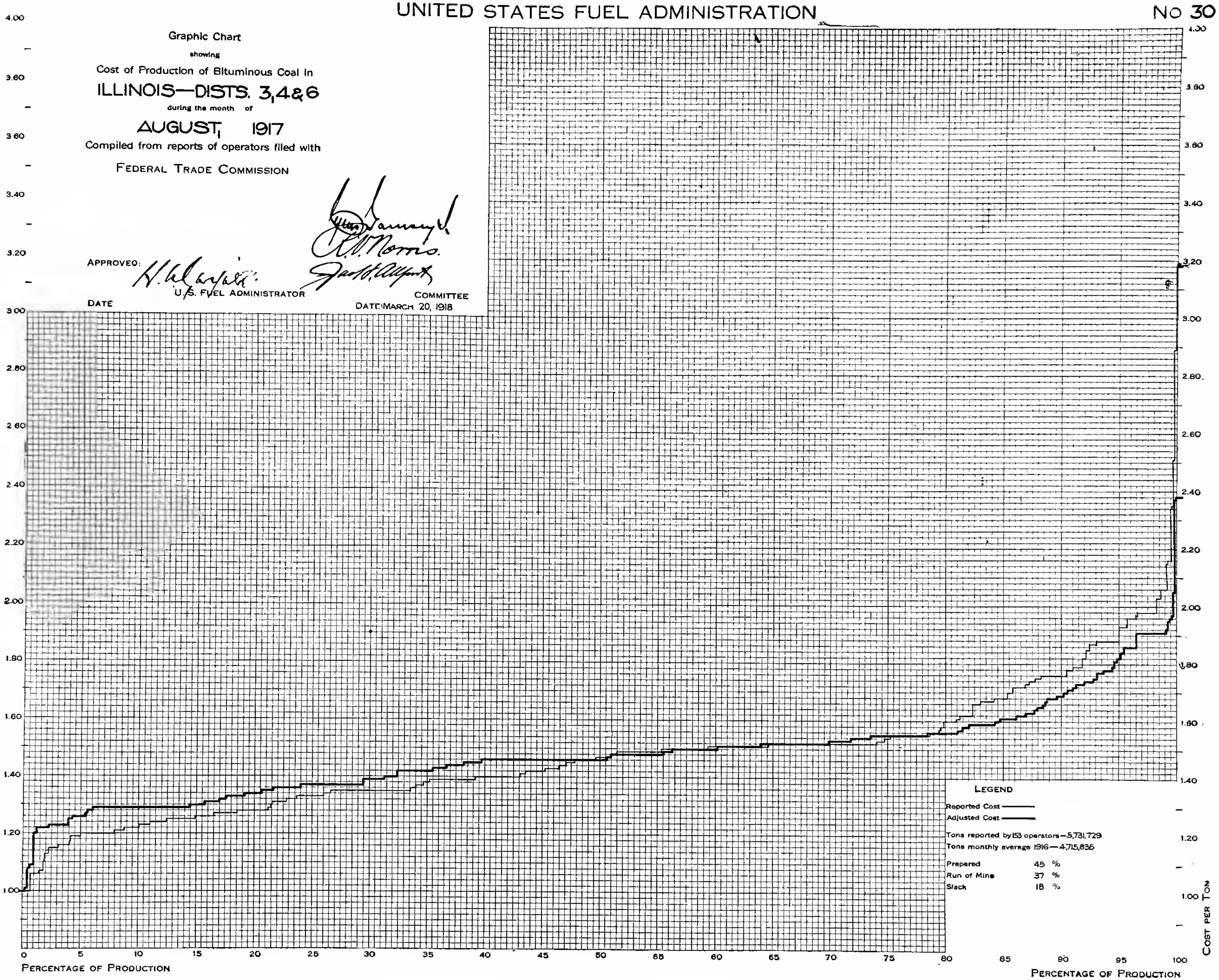
No 30

Graphic Chart
showing
Cost of Production of Bituminous Coal in
ILLINOIS—DISTS. 3, 4 & 6
during the month of
AUGUST, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield
U. S. FUEL ADMINISTRATOR

DATE

COMMITTEE
DATE: MARCH 20, 1918



LEGEND
Reported Cost ——
Adjusted Cost ——
Tons reported by 153 operators—5,731,729
Tons monthly average 1916—4,715,836
Prepared 45 %
Run of Mine 37 %
Slack 18 %

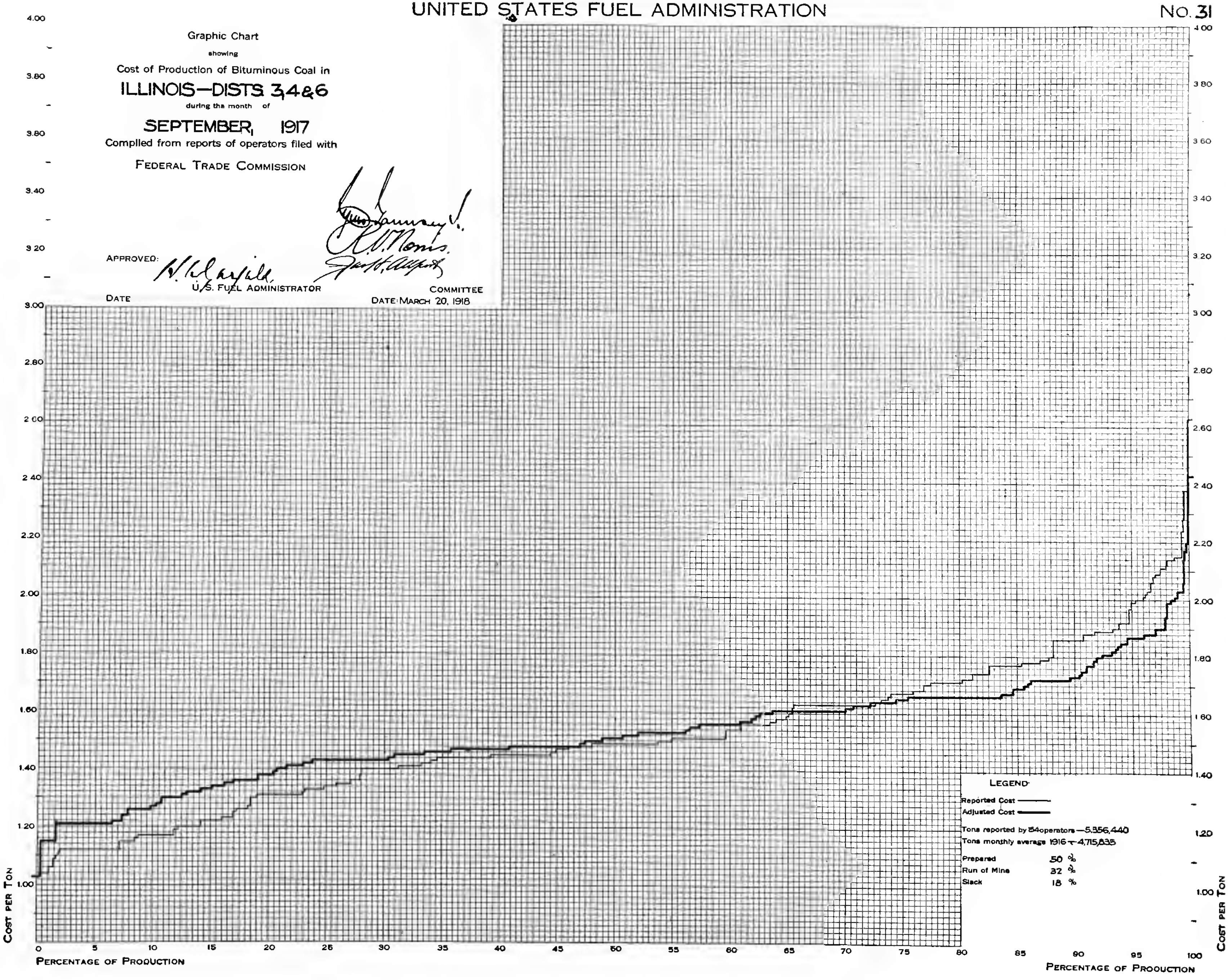
UNITED STATES FUEL ADMINISTRATION

No. 31

Graphic Chart
showing
Cost of Production of Bituminous Coal in
ILLINOIS—DISTS. 3, 4 & 6
during the month of
SEPTEMBER, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield
U. S. FUEL ADMINISTRATOR
DATE

Wm. Janney Jr.
R. V. Norris.
Jas. H. Allport
COMMITTEE
DATE: MARCH 20, 1918



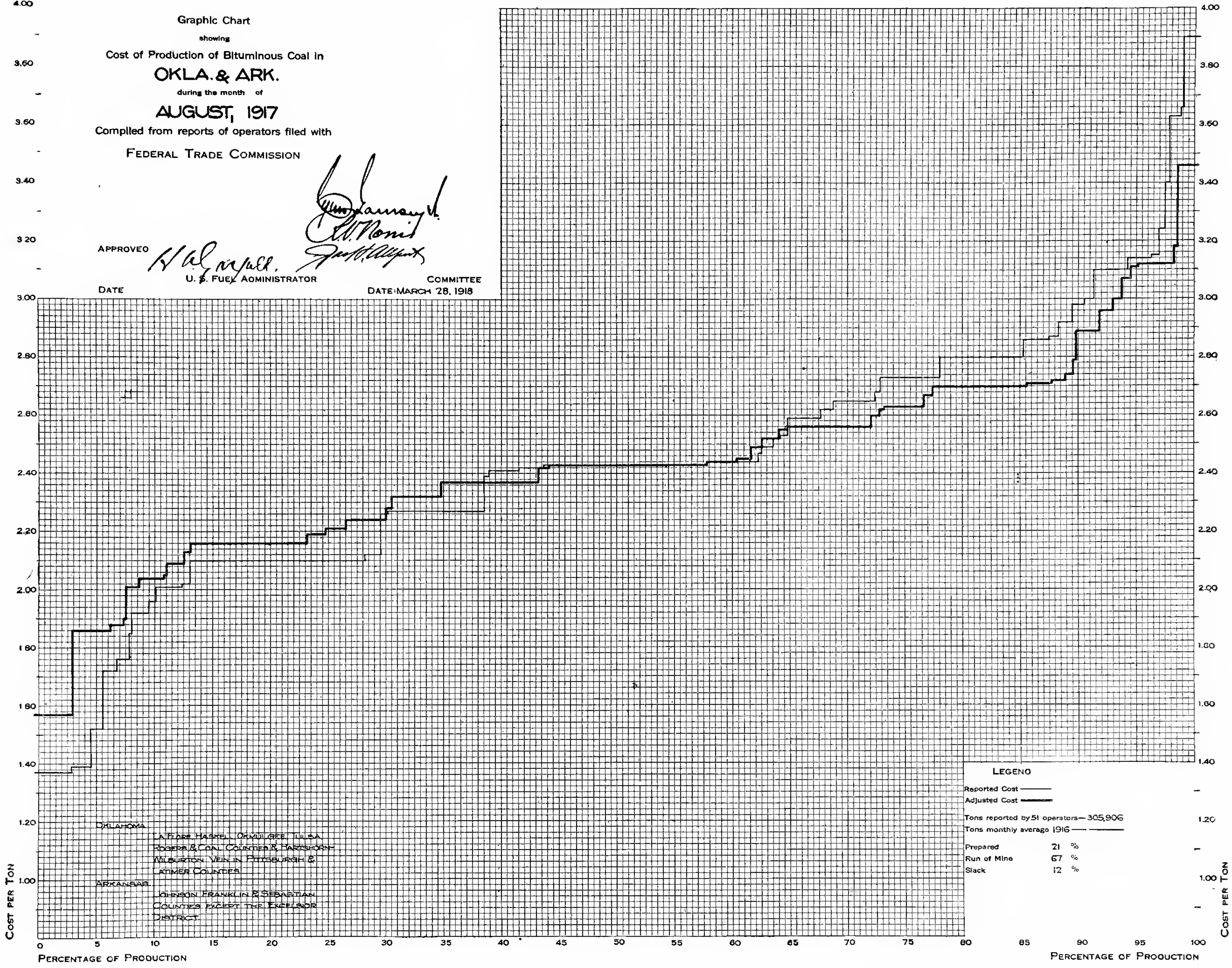
UNITED STATES FUEL ADMINISTRATION

No. 32

Graphic Chart
showing
Cost of Production of Bituminous Coal in
OKLA. & ARK.
during the month of
AUGUST, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED H A Garfield
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE: MARCH 28, 1918



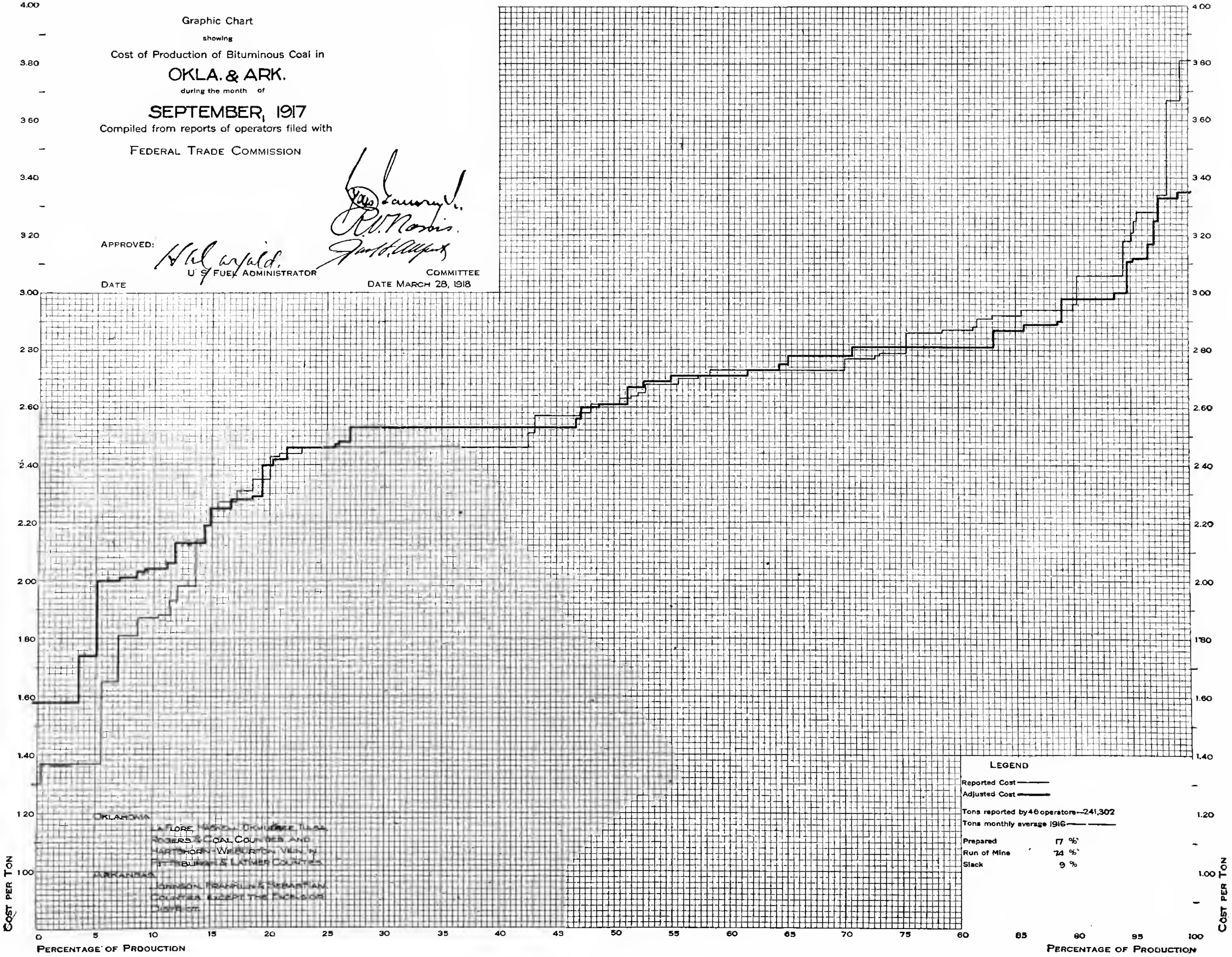
UNITED STATES FUEL ADMINISTRATION

No. 33

Graphic Chart
showing
Cost of Production of Bituminous Coal in
OKLA. & ARK.
during the month of
SEPTEMBER, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

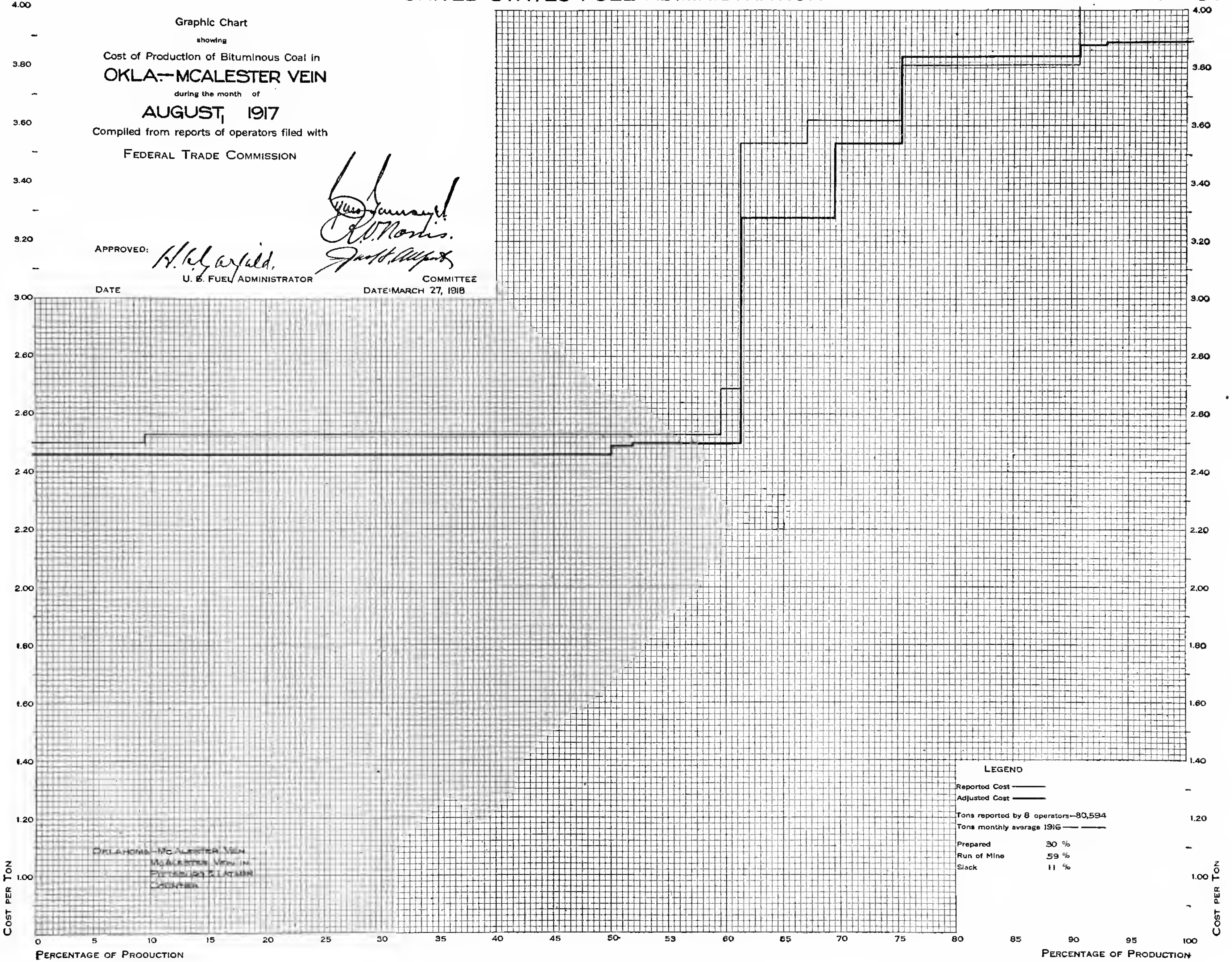
APPROVED: H. A. Garfield
U. S. FUEL ADMINISTRATOR
DATE

R. V. Norris.
Jas. H. Allport
COMMITTEE
DATE MARCH 28, 1918



UNITED STATES FUEL ADMINISTRATION

No. 34



Graphic Chart
showing
Cost of Production of Bituminous Coal in
OKLA.—MCALESTER VEIN
during the month of
AUGUST, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR
DATE

R. V. Norris.
Jas. H. Allport
COMMITTEE
DATE: MARCH 27, 1918

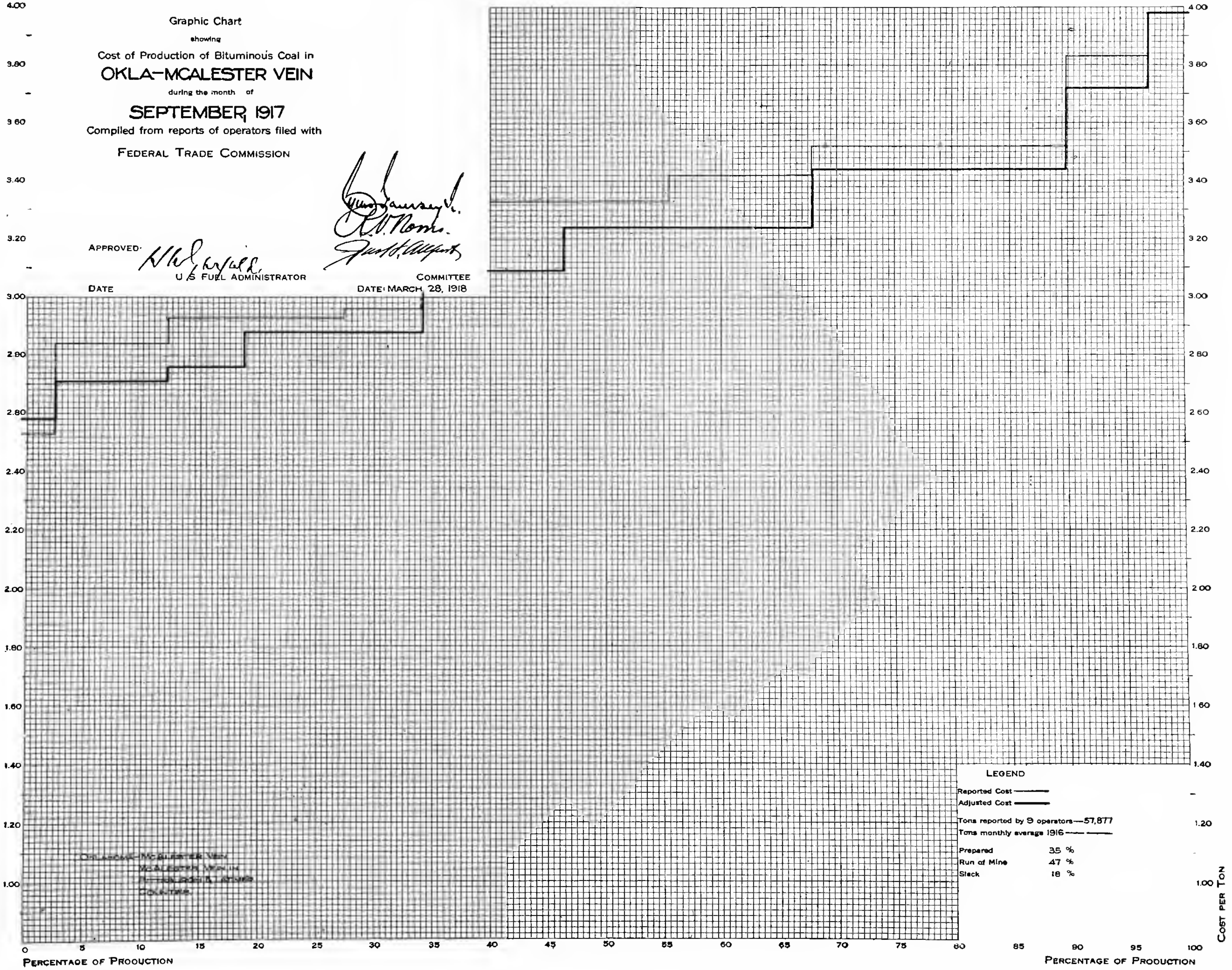
UNITED STATES FUEL ADMINISTRATION

No. 35

Graphic Chart
showing
Cost of Production of Bituminous Coal in
OKLA-MCALESTER VEIN
during the month of
SEPTEMBER, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED· H. A. Garfield
U. S. FUEL ADMINISTRATOR
DATE

R. V. Norris
Jas. H. Allport
COMMITTEE
DATE: MARCH 28, 1918



LEGEND
Reported Cost ———
Adjusted Cost ━━━
Tons reported by 9 operators—57,877
Tons monthly average 1916 ——

Prepared	35 %
Run of Mine	47 %
Slack	18 %

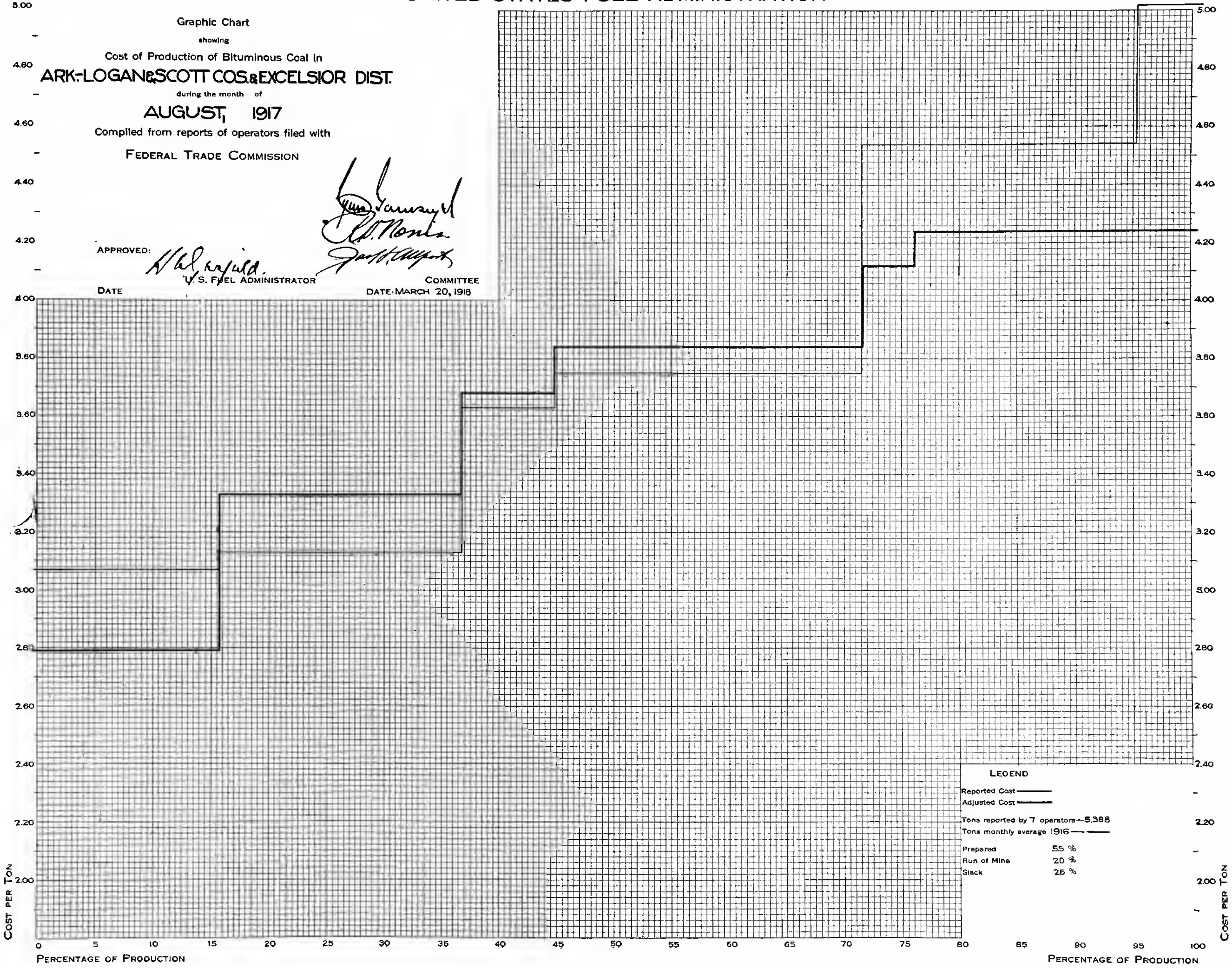
UNITED STATES FUEL ADMINISTRATION

No. 36

Graphic Chart
showing
Cost of Production of Bituminous Coal in
ARK.-LOGAN & SCOTT COS. & EXCELSIOR DIST.
during the month of
AUGUST, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE: MARCH 20, 1918



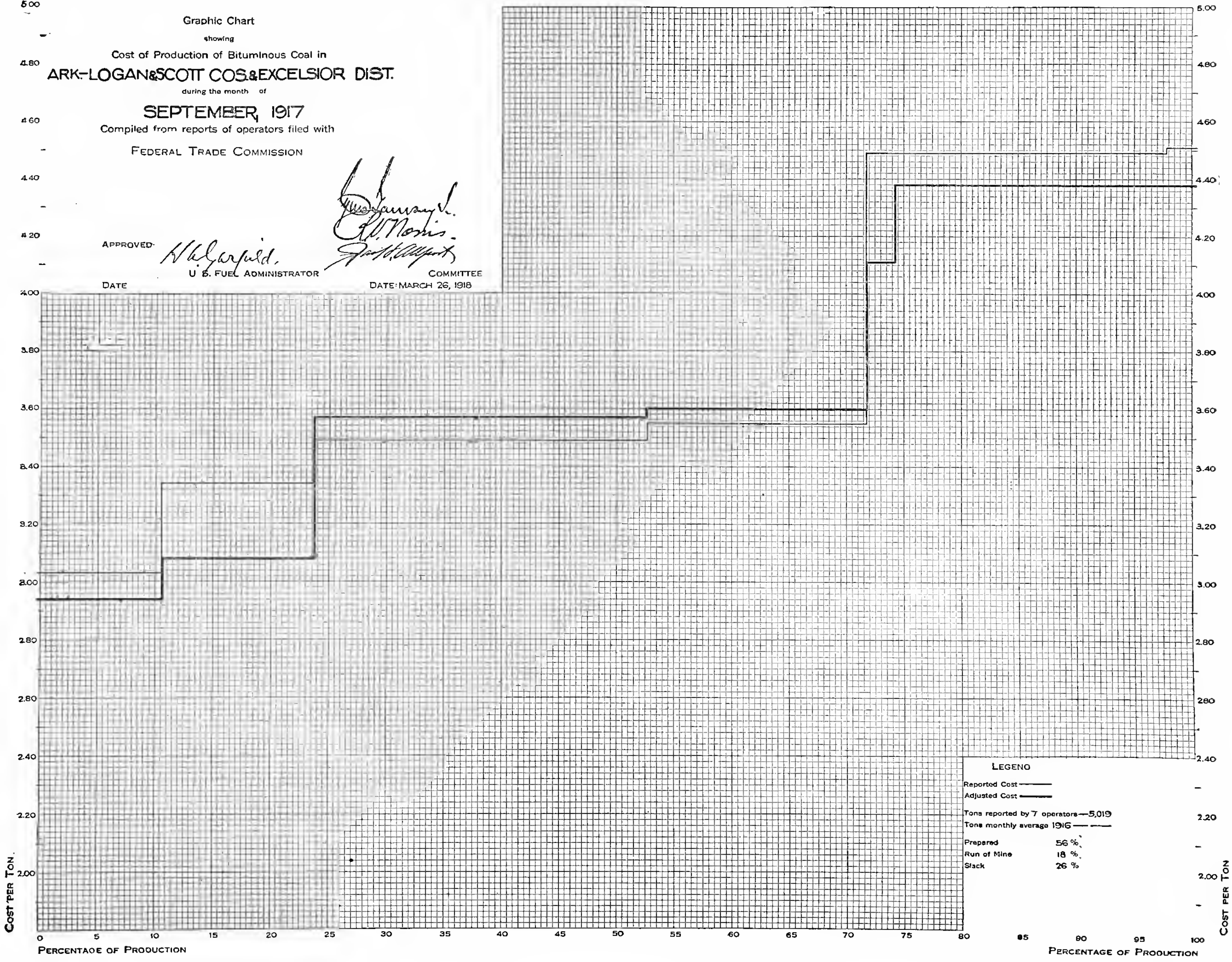
UNITED STATES FUEL ADMINISTRATION

No. 37

Graphic Chart
showing
Cost of Production of Bituminous Coal in
ARK.-LOGAN & SCOTT COS. & EXCELSIOR DIST.
during the month of
SEPTEMBER, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE: MARCH 26, 1918



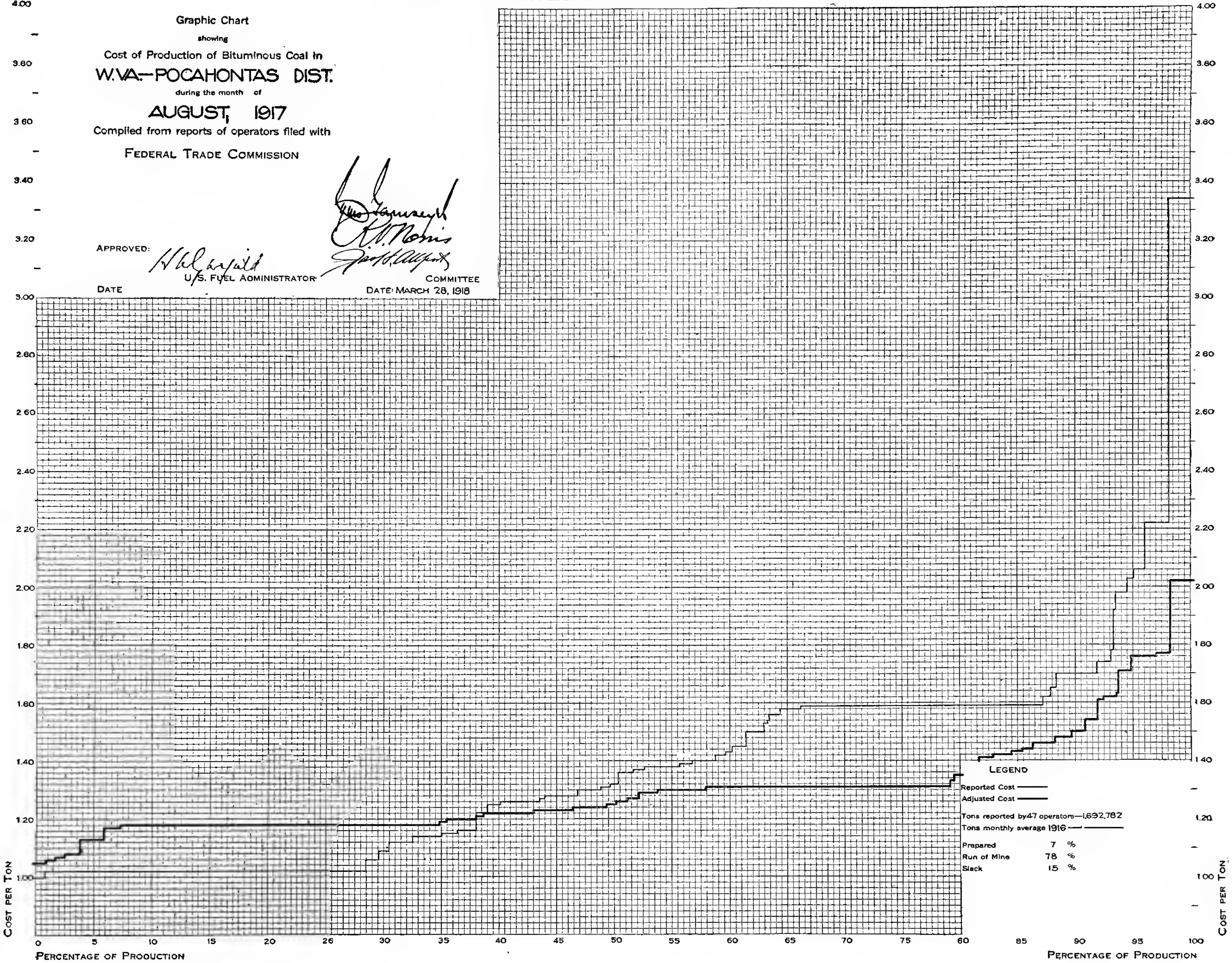
UNITED STATES FUEL ADMINISTRATION

No. 38

Graphic Chart
showing
Cost of Production of Bituminous Coal in
W.VA.—POCAHONTAS DIST.
during the month of
AUGUST, 1917
Compiled from reports of operators filed with
Federal Trade Commission

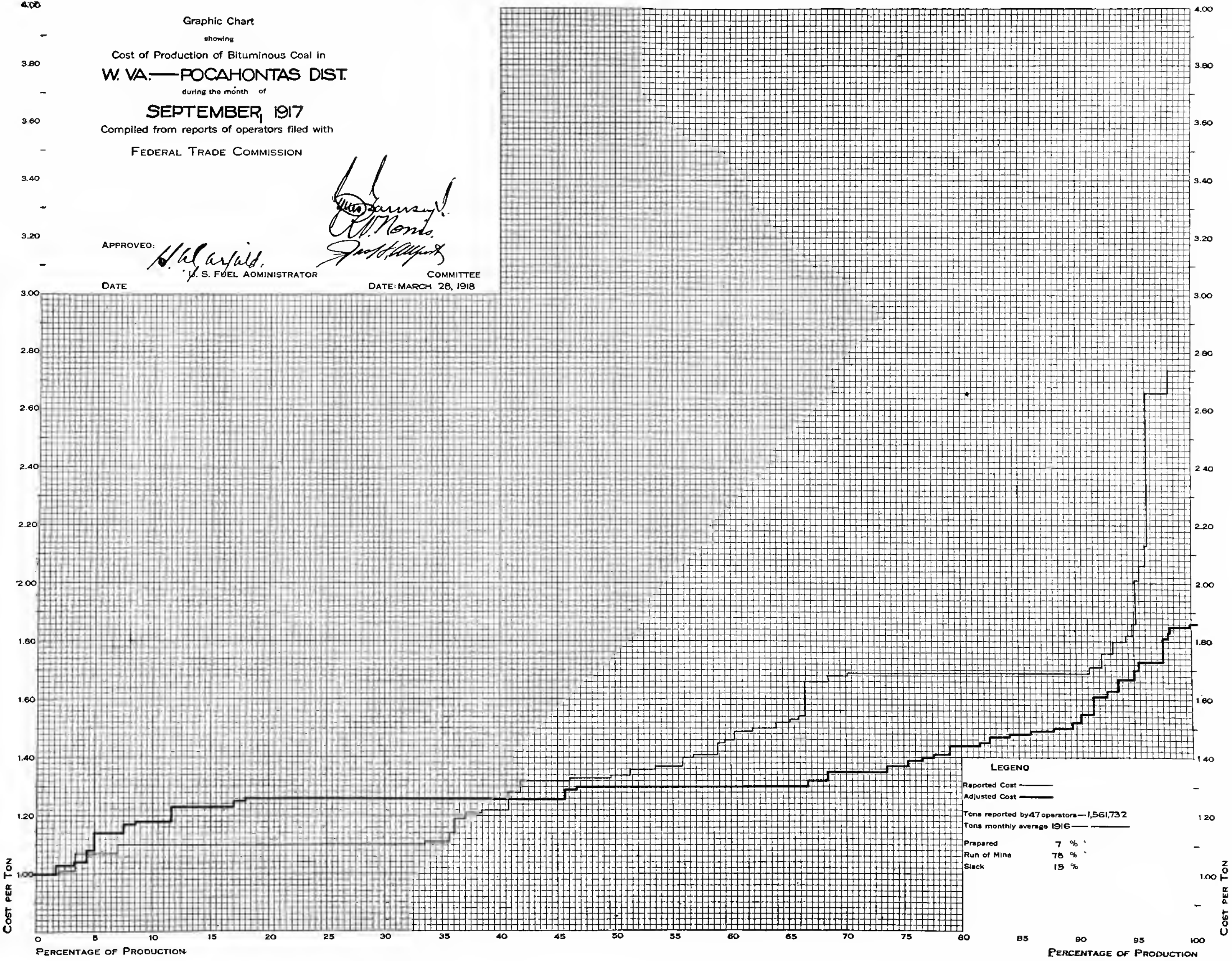
Approved: H A Garfield
U/S. Fuel Administrator
Date

R V Norris
Jas H Allport
Committee
Date: March 28, 1918



UNITED STATES FUEL ADMINISTRATION

No. 39



Graphic Chart
showing
Cost of Production of Bituminous Coal in
W. VA.—POCAHONTAS DIST.
during the month of
SEPTEMBER, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield,
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE: MARCH 28, 1918

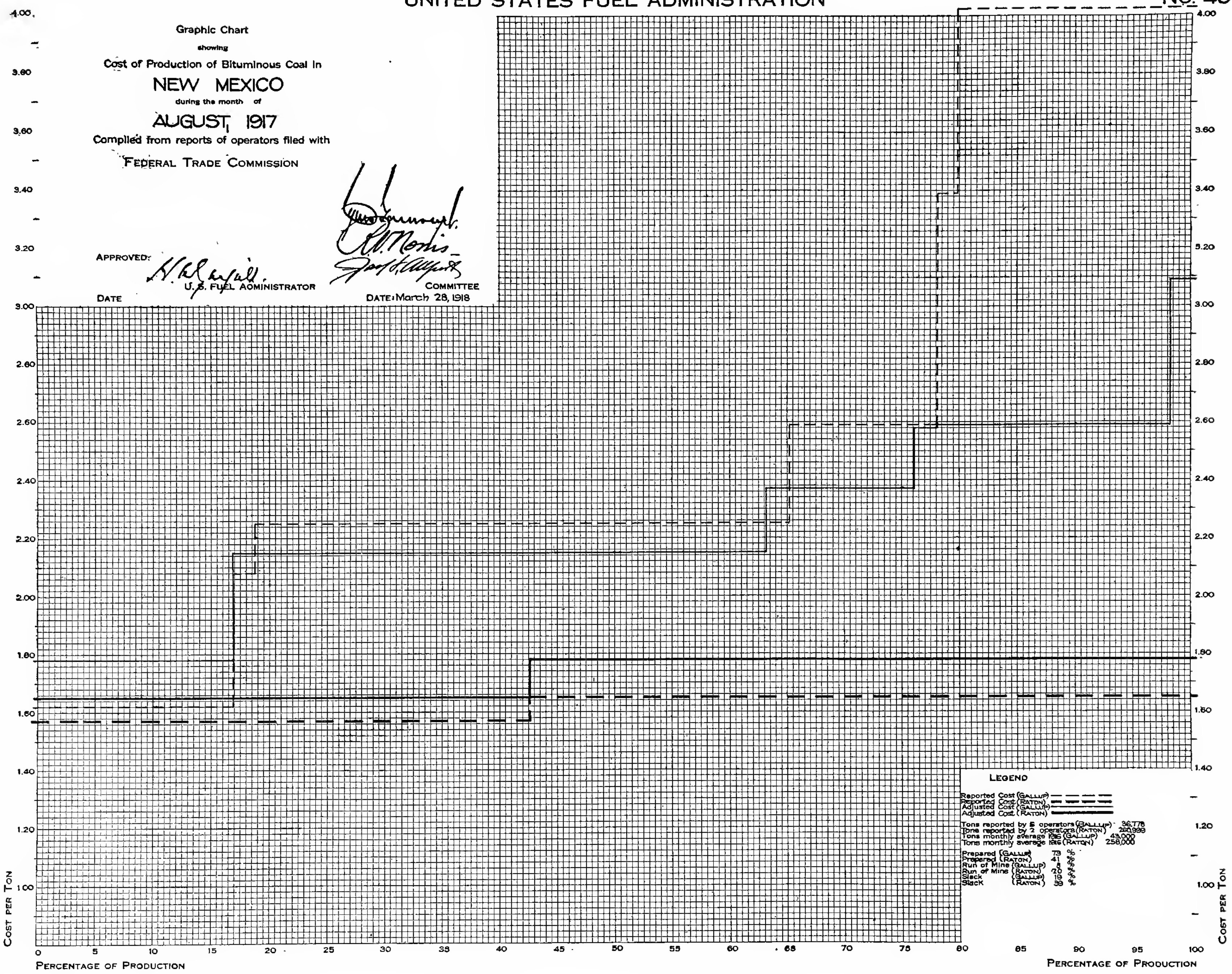
UNITED STATES FUEL ADMINISTRATION

No. 40

Graphic Chart
showing
Cost of Production of Bituminous Coal in
NEW MEXICO
during the month of
AUGUST, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR
DATE

C. W. Morris
COMMITTEE
DATE: March 28, 1918



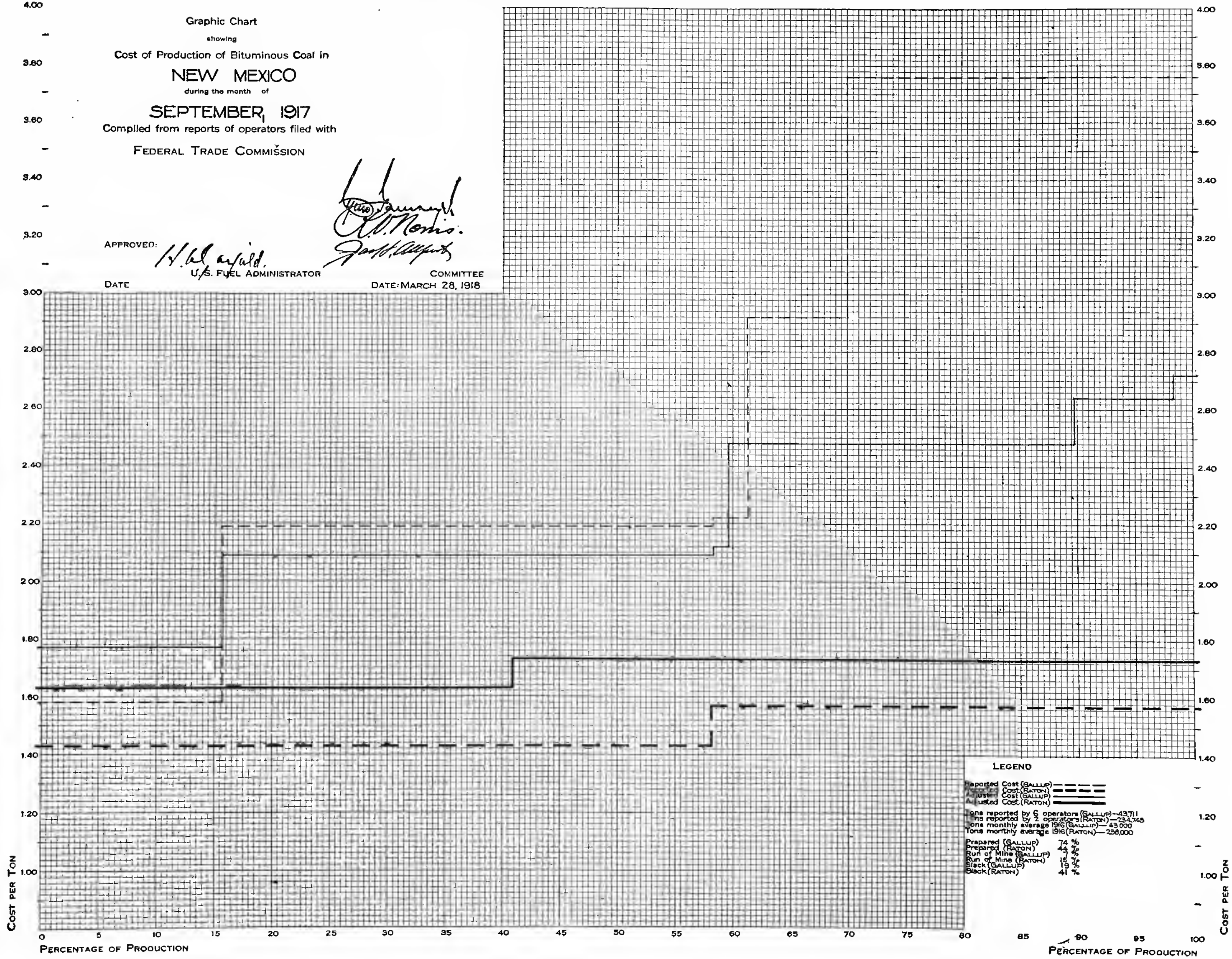
UNITED STATES FUEL ADMINISTRATION

No. 41

Graphic Chart
showing
Cost of Production of Bituminous Coal in
NEW MEXICO
during the month of
SEPTEMBER, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE: MARCH 28, 1918



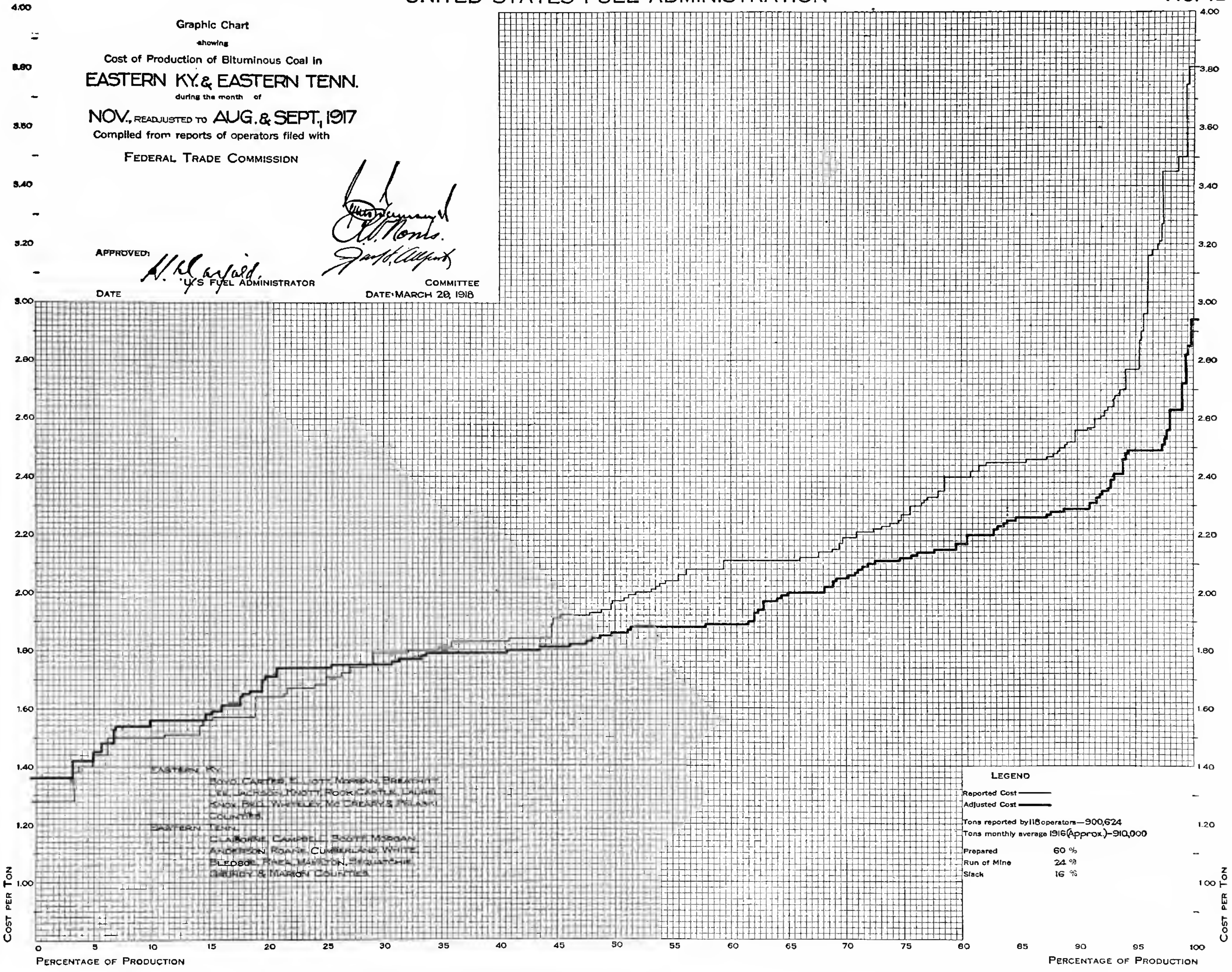
UNITED STATES FUEL ADMINISTRATION

No. 42

Graphic Chart
showing
Cost of Production of Bituminous Coal in
EASTERN KY. & EASTERN TENN.
during the month of
NOV., READJUSTED TO AUG. & SEPT., 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield
U.S. FUEL ADMINISTRATOR
DATE

C. E. Lesher
W. Morris
Jas. H. Allport
COMMITTEE
DATE: MARCH 28, 1918



EASTERN KY.
BOYD, CARTER, ELLIOTT, MORGAN, BREATHITT, LEE, JACKSON, KNOTT, ROCK CASTLE, LAUREL, KNOX, BELL, WHITLEY, MC CREARY & PULASKI COUNTIES.
EASTERN TENN.
CLAIBORNE, CAMPBELL, SCOTT, MORGAN, ANDERSON, ROANE, CUMBERLAND, WHITE, BLEDSOE, RHEA, HAMILTON, SEQUATCHIE, GRUNDY & MARION COUNTIES.

LEGEND
Reported Cost ——
Adjusted Cost ━━

Tons reported by 118 operators—900,624
Tons monthly average 1916 (Approx.)—910,000

Prepared	60 %
Run of Mine	24 %
Slack	16 %

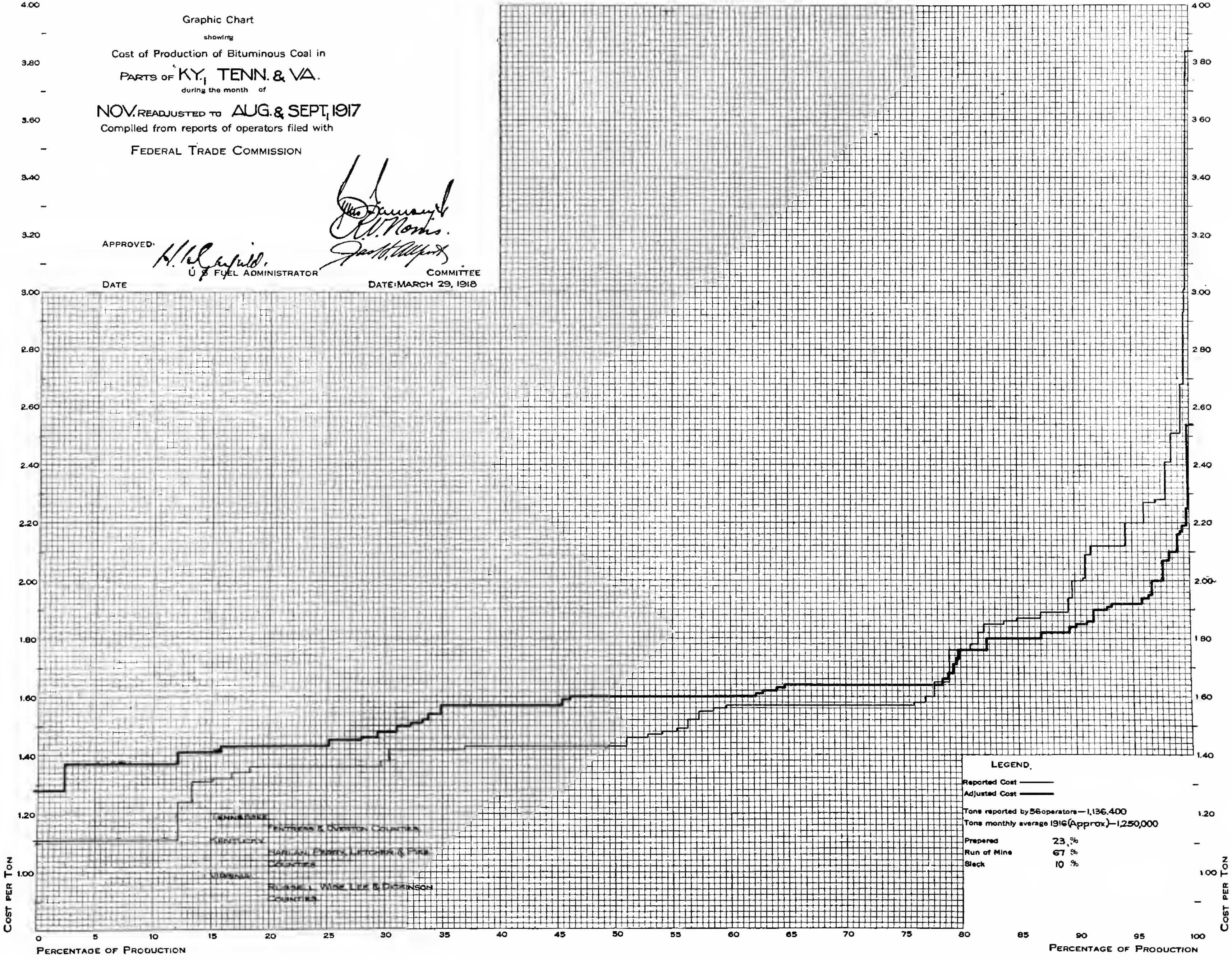
UNITED STATES FUEL ADMINISTRATION

No. 43

Graphic Chart
showing
Cost of Production of Bituminous Coal in
PARTS OF KY., TENN. & VA.
during the month of
NOV. READJUSTED TO AUG. & SEPT., 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR
DATE

R. V. Norris.
Jas. H. Allport
COMMITTEE
DATE: MARCH 29, 1918



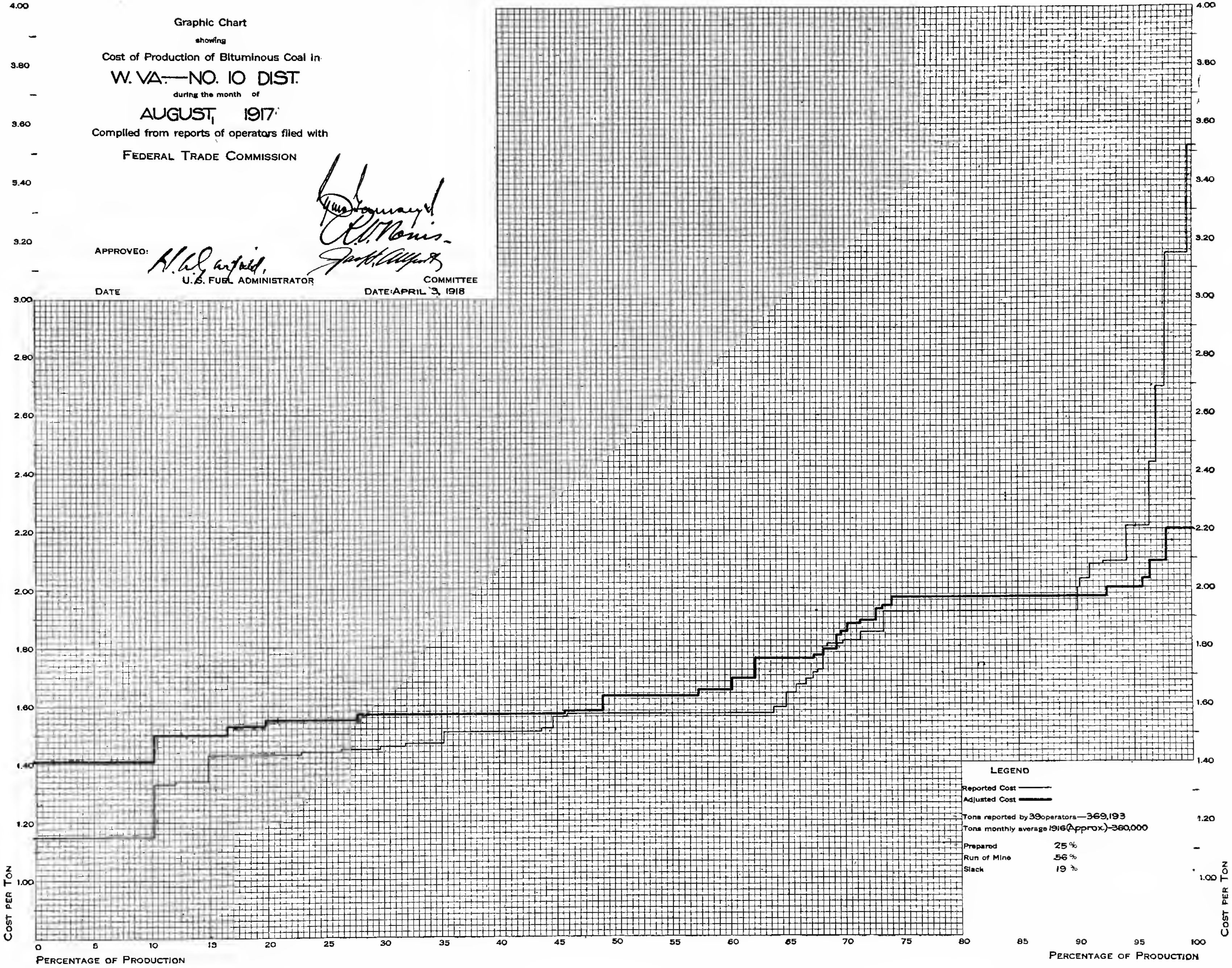
UNITED STATES FUEL ADMINISTRATION

No. 44

Graphic Chart
showing
Cost of Production of Bituminous Coal in
W. VA.—NO. 10 DIST.
during the month of
AUGUST, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield,
U. S. FUEL ADMINISTRATOR
DATE

R. V. Norris
COMMITTEE
DATE: APRIL 3, 1918



LEGEND

Reported Cost ——

Adjusted Cost ▬▬

Tons reported by 39 operators—369,193
Tons monthly average 1916 (Approx.)—360,000

Prepared	25 %
Run of Mine	56 %
Slack	19 %

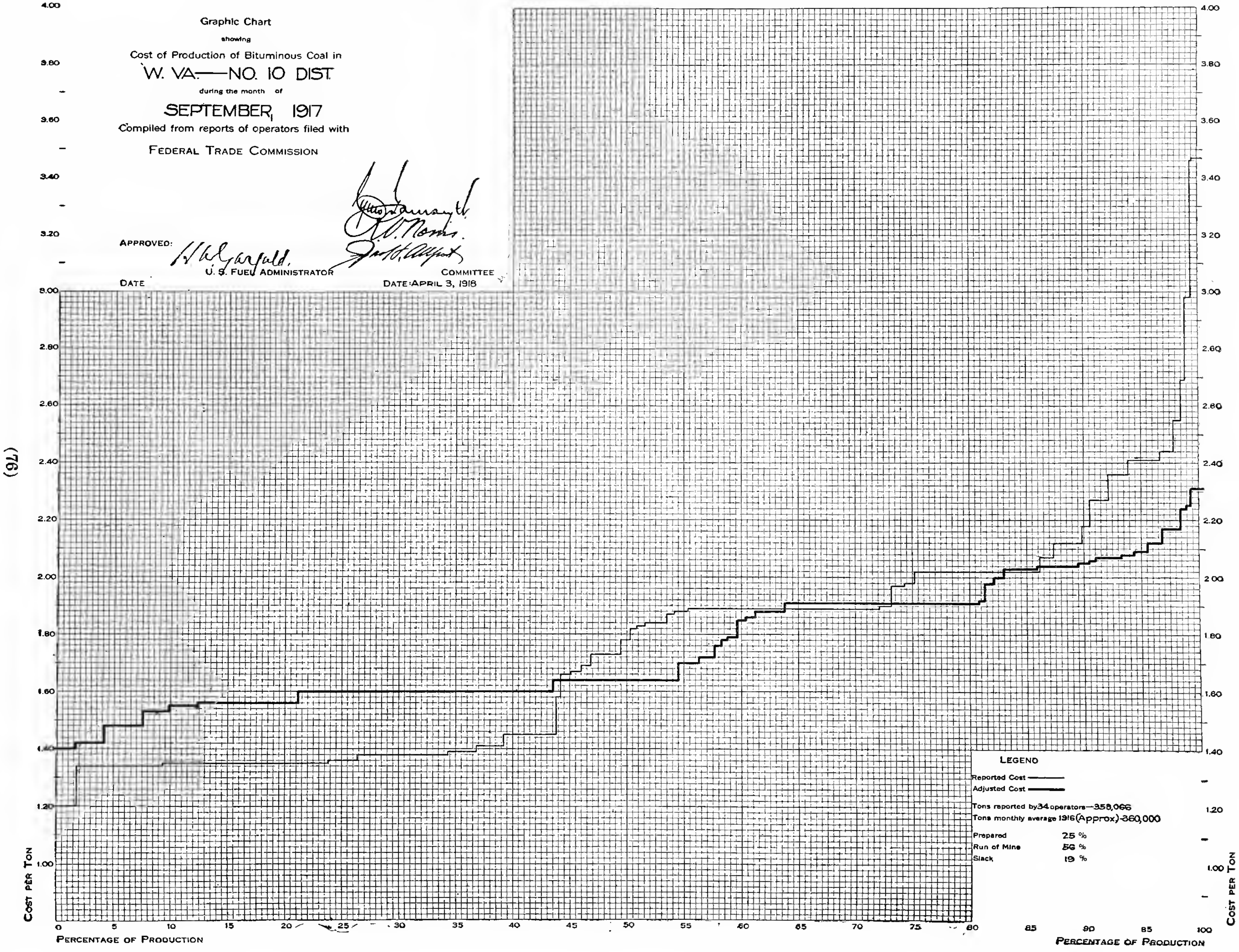
UNITED STATES FUEL ADMINISTRATION

No. 45

Graphic Chart
showing
Cost of Production of Bituminous Coal in
W. VA.—NO. 10 DIST.
during the month of
SEPTEMBER, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H A Garfield
U. S. FUEL ADMINISTRATOR
DATE

R. V. Norris
COMMITTEE
DATE: APRIL 3, 1918



Tons reported by 34 operators—358,066
Tons monthly average 1916 (Approx.)—360,000

Prepared	25 %
Run of Mine	56 %
Slack	19 %

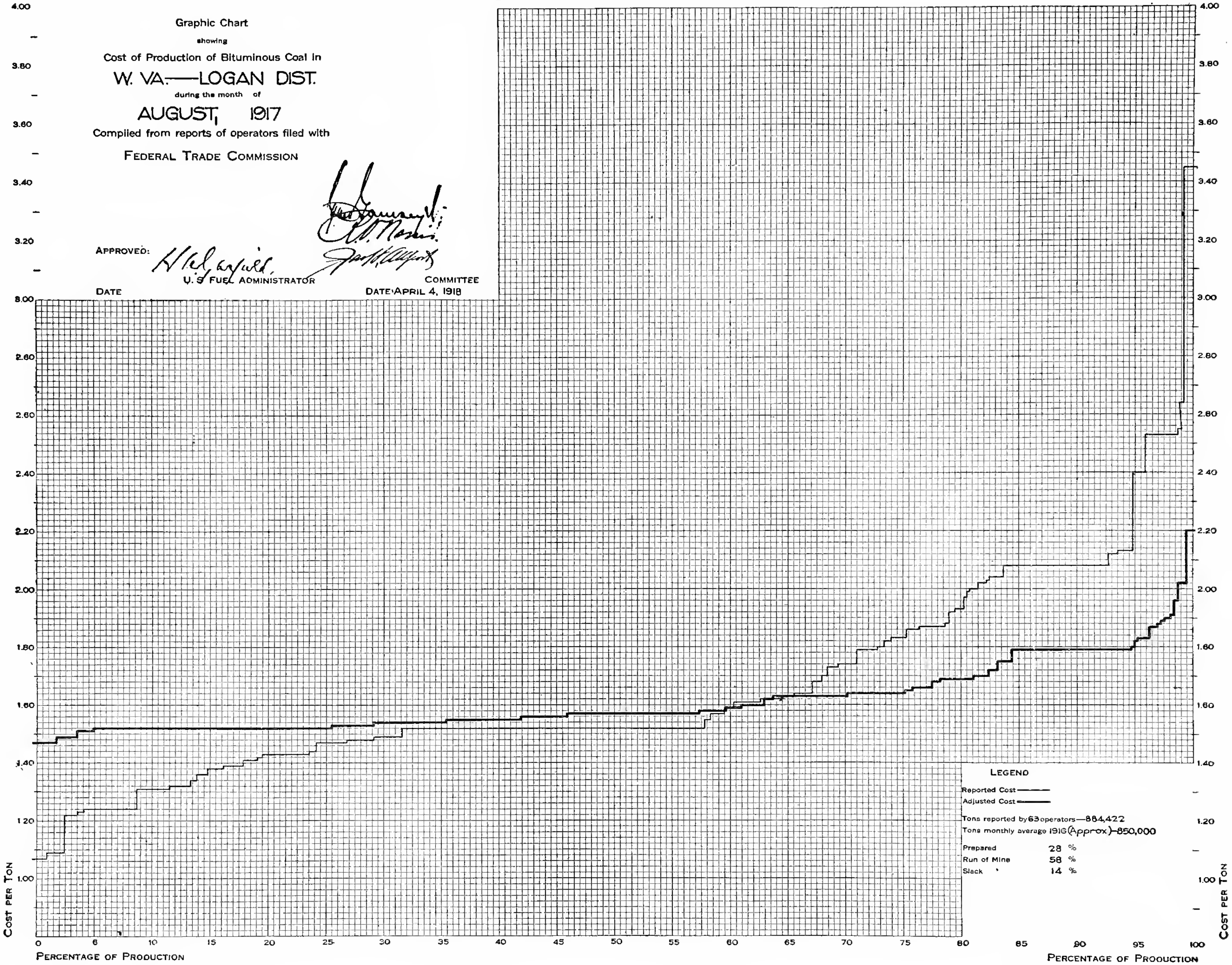
UNITED STATES FUEL ADMINISTRATION

No. 46

Graphic Chart
showing
Cost of Production of Bituminous Coal in
W. VA.—LOGAN DIST.
during the month of
AUGUST, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield,
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE APRIL 4, 1918



LEGEND
Reported Cost ——
Adjusted Cost ——
Tons reported by 63 operators—884,422
Tons monthly average 1916 (Approx)—850,000
Prepared 28 %
Run of Mine 58 %
Slack 14 %

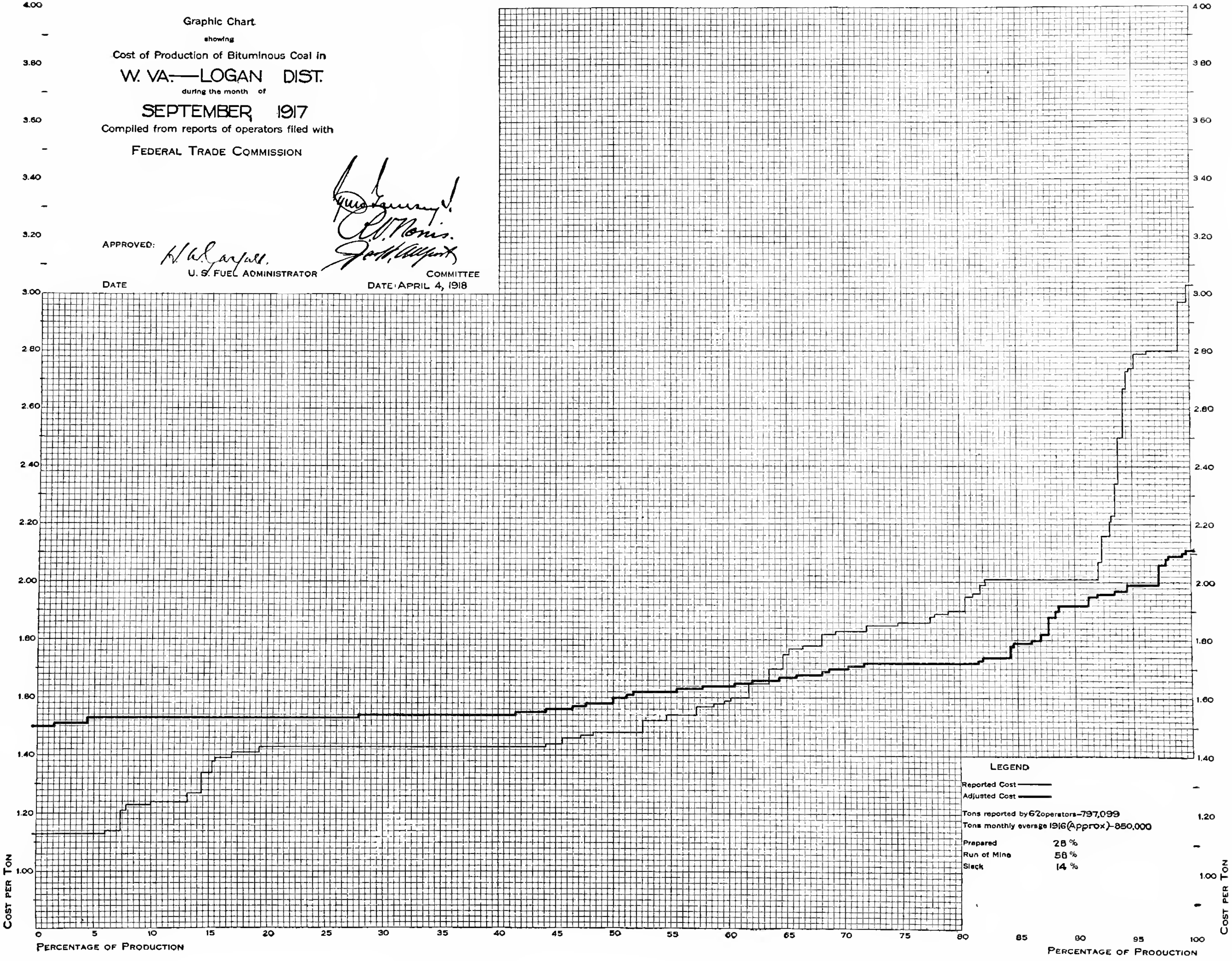
UNITED STATES FUEL ADMINISTRATION

No 47

Graphic Chart
showing
Cost of Production of Bituminous Coal in
W. VA.—LOGAN DIST.
during the month of
SEPTEMBER 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield
U. S. FUEL ADMINISTRATOR
DATE

R. V. Norris
COMMITTEE
DATE: APRIL 4, 1918



Tons reported by 62 operators—797,099
Tons monthly average 1916 (Approx.)—850,000

Prepared	28 %
Run of Mine	58 %
Slack	14 %

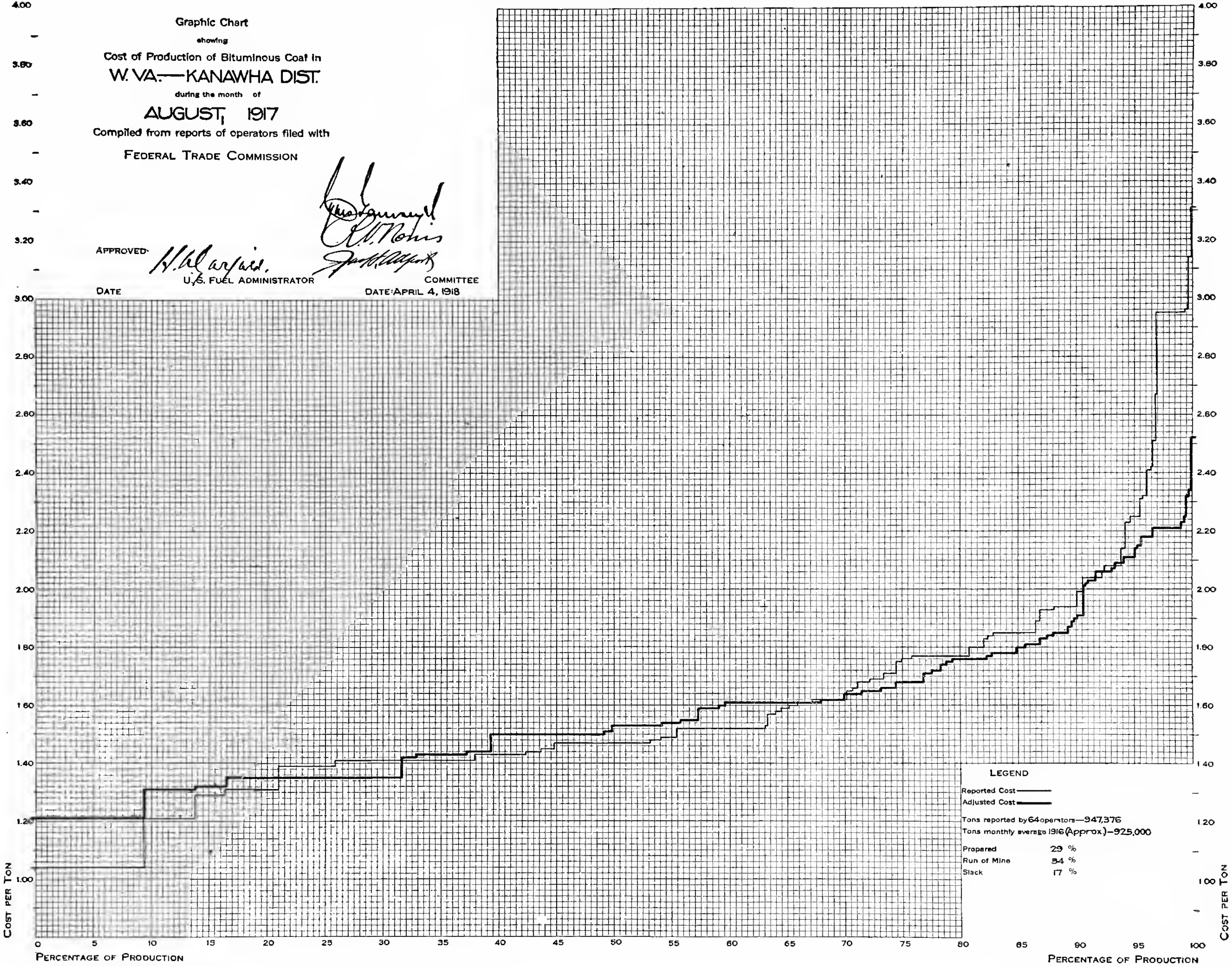
UNITED STATES FUEL ADMINISTRATION

NO. 48

Graphic Chart
showing
Cost of Production of Bituminous Coal in
W. VA.—KANAWHA DIST.
during the month of
AUGUST, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE: APRIL 4, 1918



LEGEND

Reported Cost ——
Adjusted Cost ━━

Tons reported by 64 operators—947,376
Tons monthly average 1916 (Approx.)—925,000

Prepared	29 %
Run of Mine	54 %
Slack	17 %

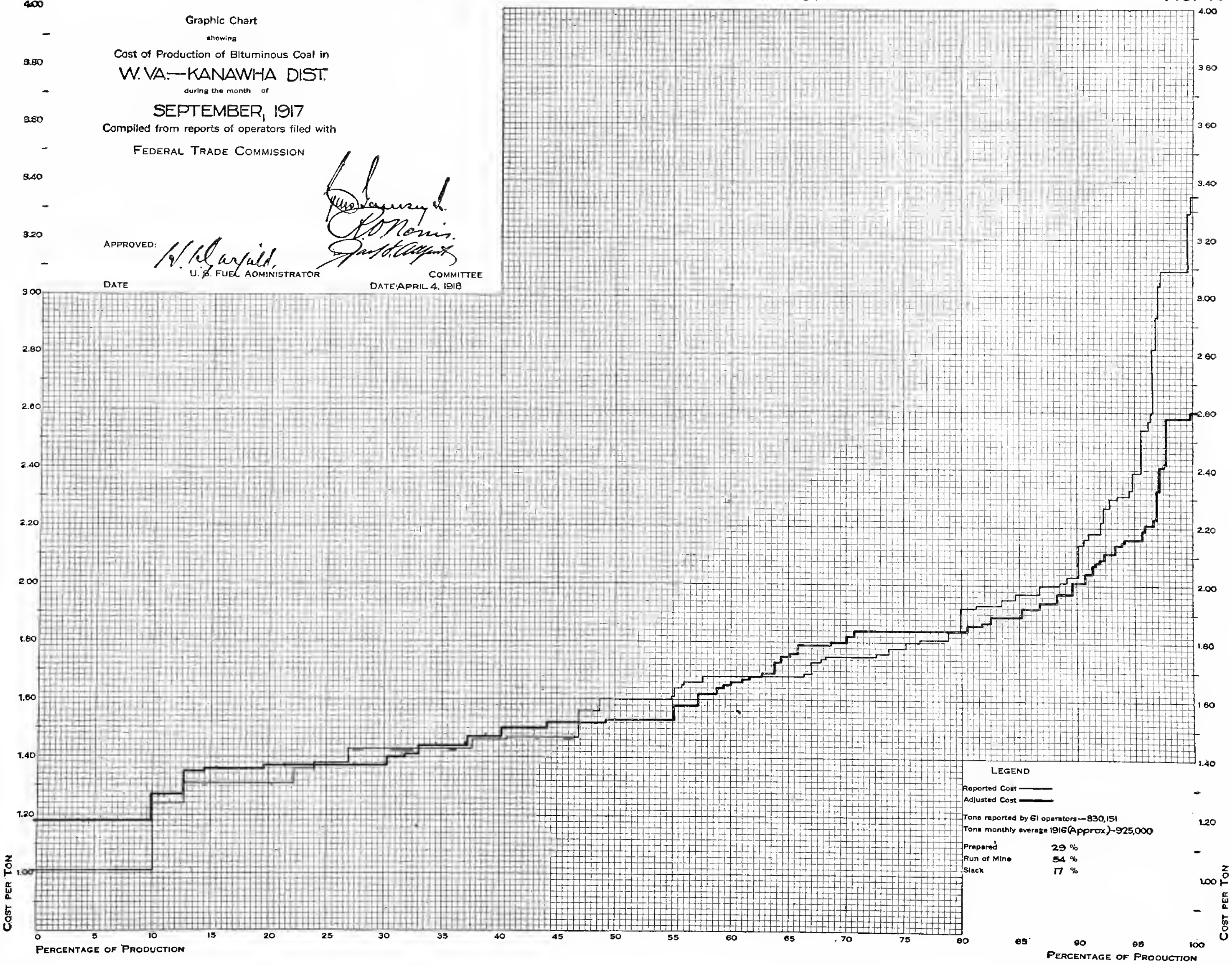
UNITED STATES FUEL ADMINISTRATION

No. 49

Graphic Chart
showing
Cost of Production of Bituminous Coal in
W. VA.—KANAWHA DIST.
during the month of
SEPTEMBER, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield,
U. S. FUEL ADMINISTRATOR
DATE

R. V. Norris.
Jas. H. Allport
COMMITTEE
DATE APRIL 4, 1918



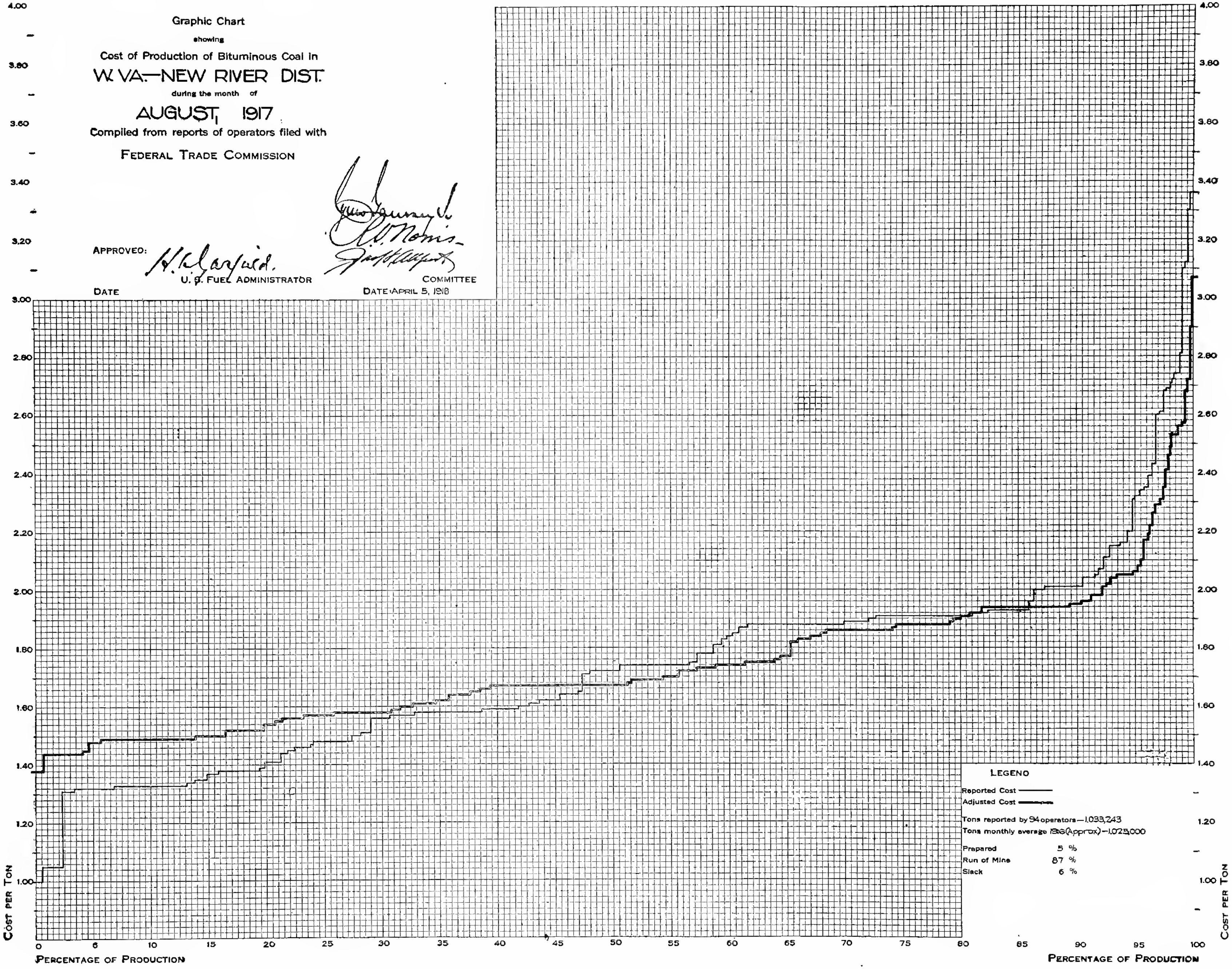
UNITED STATES FUEL ADMINISTRATION

No. 50

Graphic Chart
showing
Cost of Production of Bituminous Coal in
W. VA.—NEW RIVER DIST.
during the month of
AUGUST, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE APRIL 5, 1918



Tons reported by 94 operators—1,033,243
Tons monthly average 1916 (Approx)—1,025,000

Prepared	5 %
Run of Mine	87 %
Slack	6 %

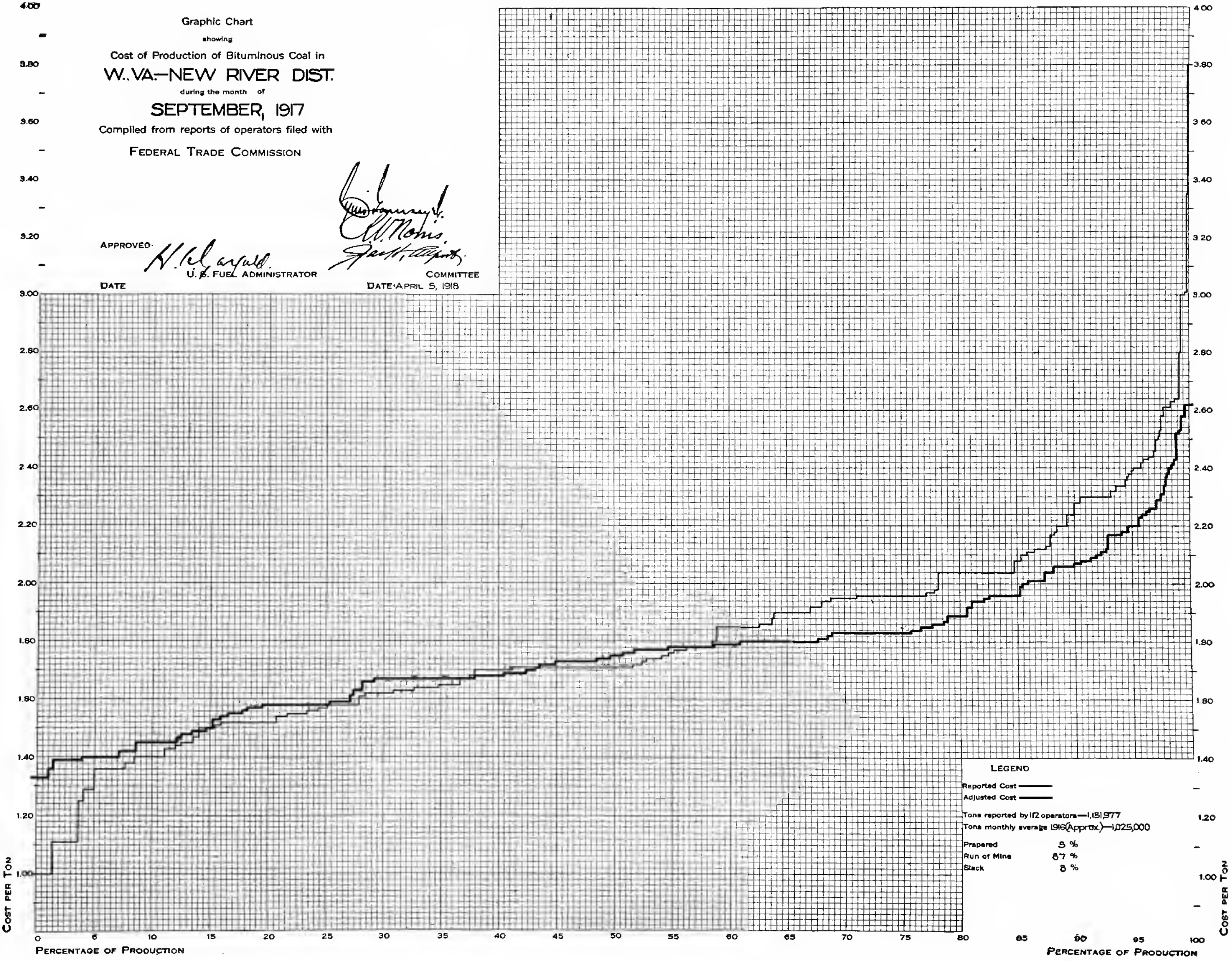
UNITED STATES FUEL ADMINISTRATION

No. 51

Graphic Chart
showing
Cost of Production of Bituminous Coal in
W. VA.–NEW RIVER DIST.
during the month of
SEPTEMBER, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE: APRIL 5, 1918



LEGEND
Reported Cost ——
Adjusted Cost ——
Tons reported by 112 operators—1,151,977
Tons monthly average 1916 (Approx.)—1,025,000

Prepared	5 %
Run of Mine	87 %
Slack	8 %

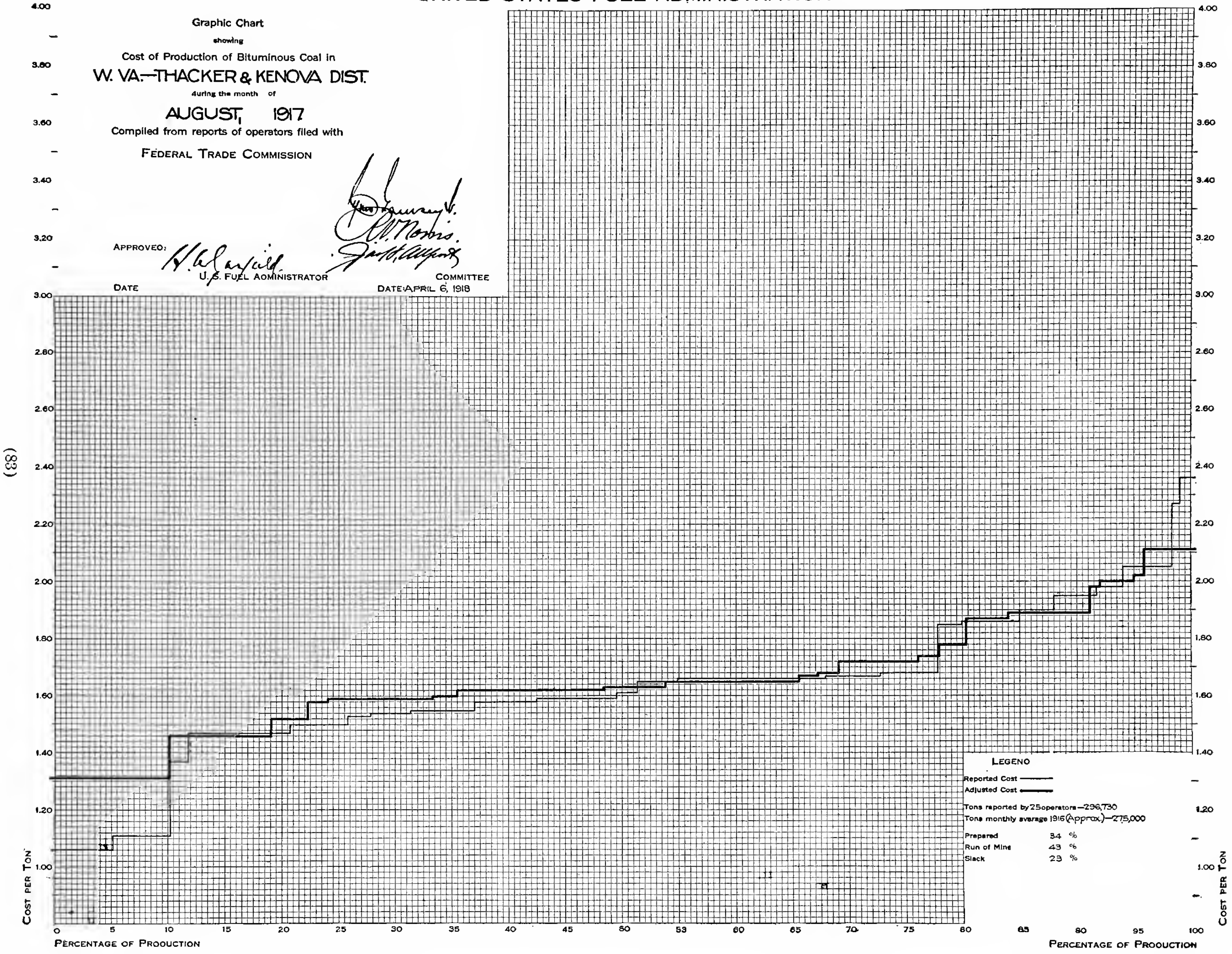
UNITED STATES FUEL ADMINISTRATION

No. 52

Graphic Chart
showing
Cost of Production of Bituminous Coal in
W. VA.—THACKER & KENOVA DIST.
during the month of
AUGUST, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE APRIL 6, 1918



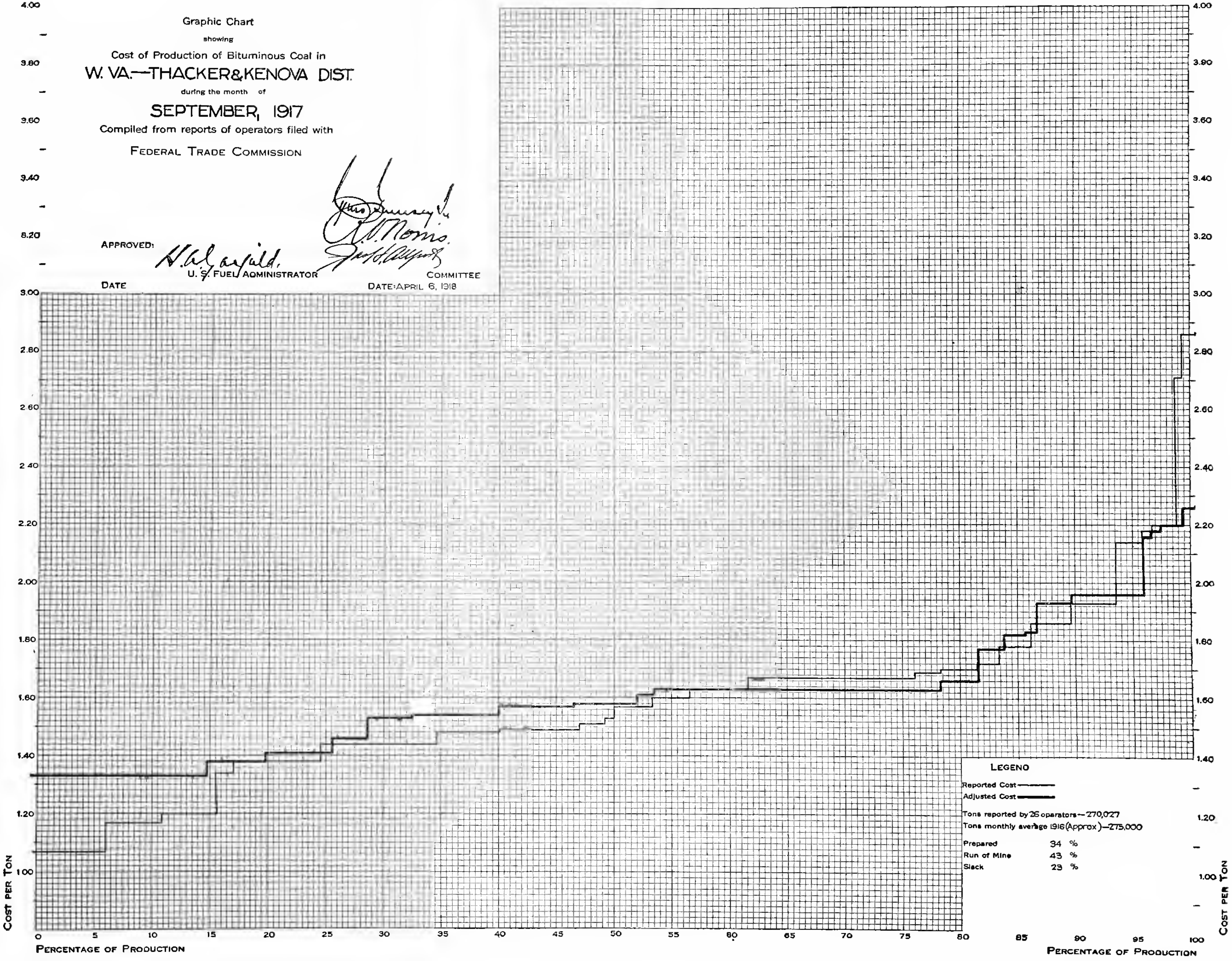
UNITED STATES FUEL ADMINISTRATION

No. 53

Graphic Chart
showing
Cost of Production of Bituminous Coal in
W. VA.—THACKER & KENOVA DIST.
during the month of
SEPTEMBER, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield
U. S. FUEL ADMINISTRATOR
DATE

J. D. Morris
COMMITTEE
DATE: APRIL 6, 1918



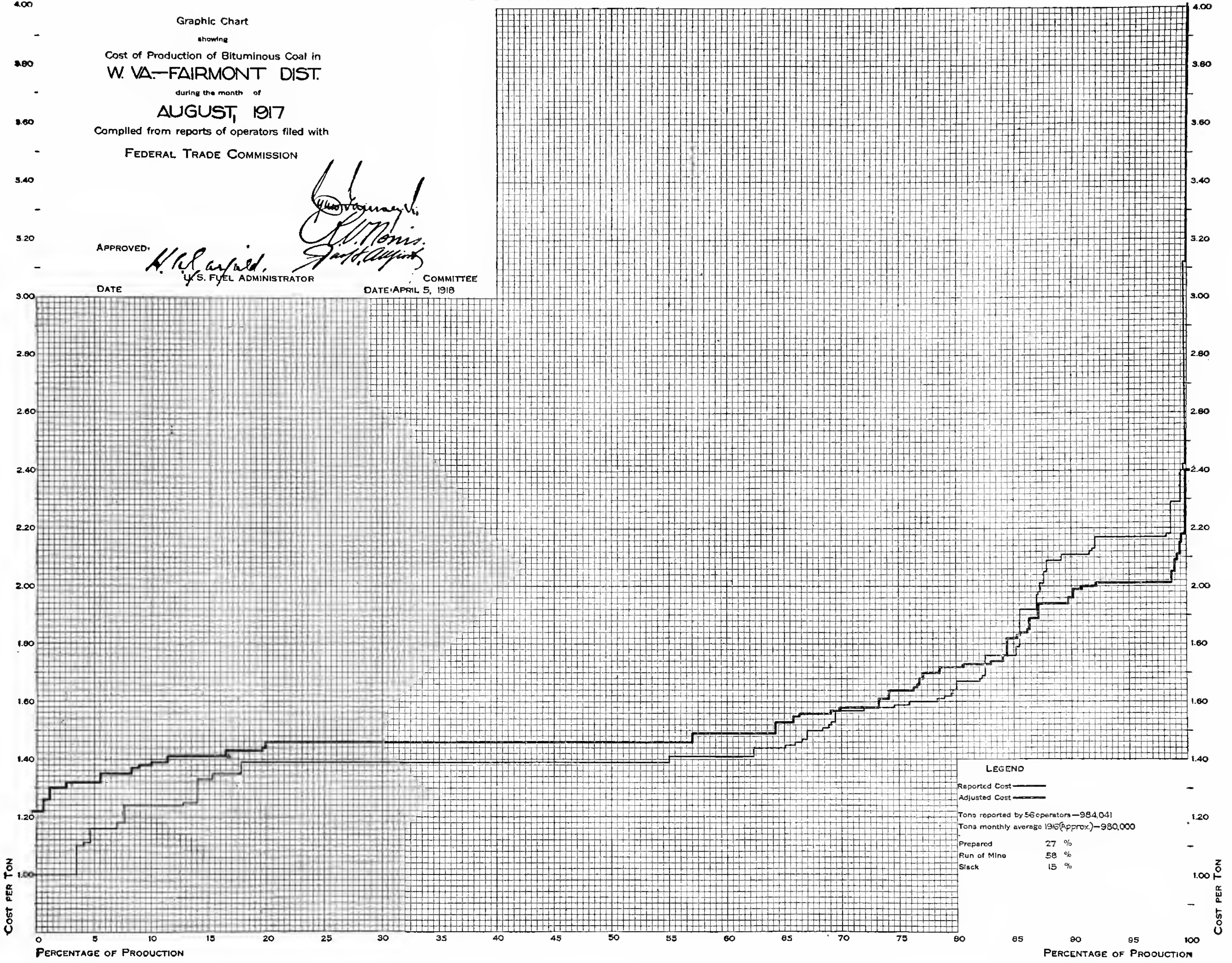
UNITED STATES FUEL ADMINISTRATION

No. 54

Graphic Chart
showing
Cost of Production of Bituminous Coal in
W. VA.—FAIRMONT DIST.
during the month of
AUGUST, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

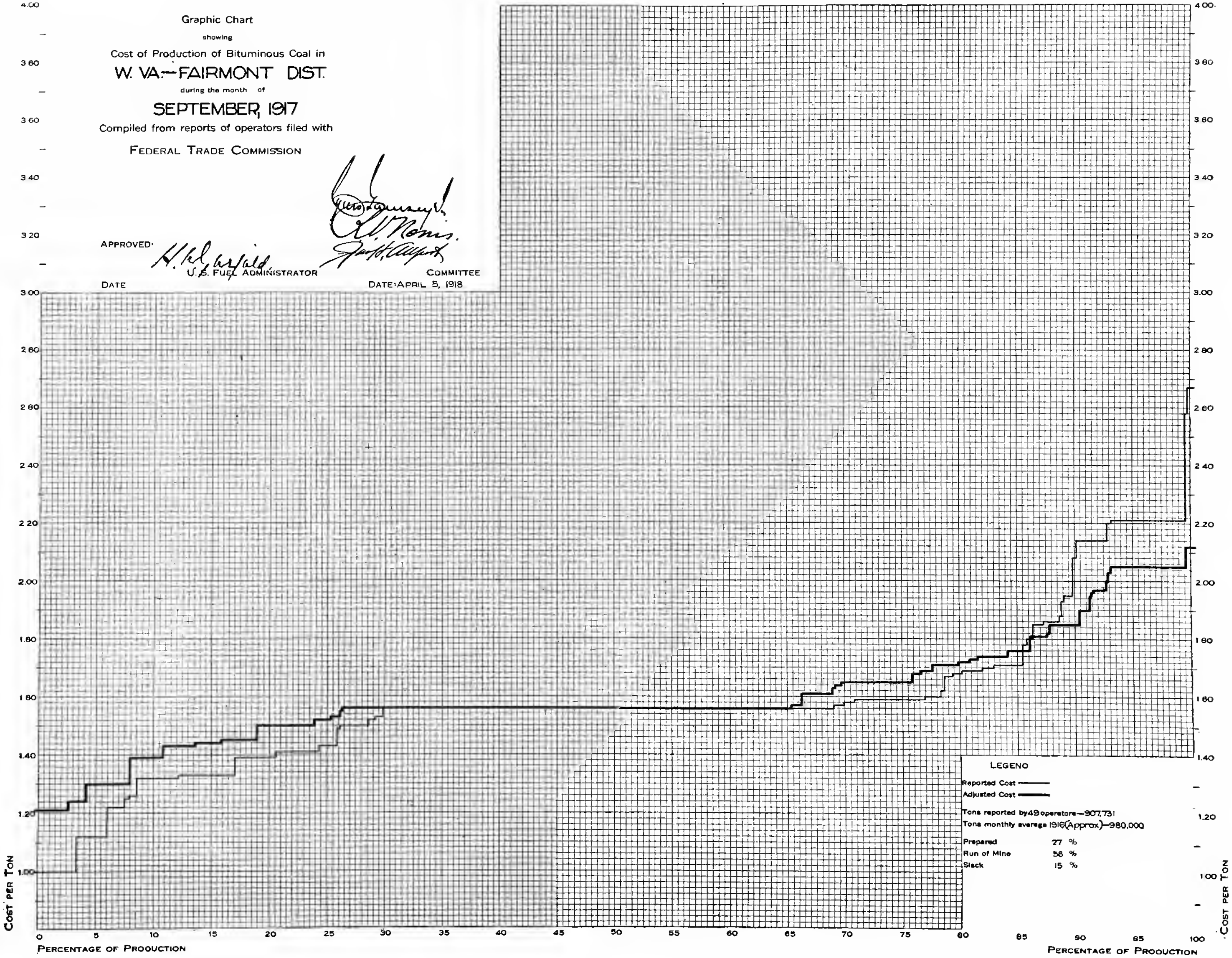
APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR
DATE

R. V. Norris.
Jas. H. Allport
COMMITTEE
DATE: APRIL 5, 1918



UNITED STATES FUEL ADMINISTRATION

No. 55



Graphic Chart

showing

Cost of Production of Bituminous Coal in

W. VA.—FAIRMONT DIST.

during the month of

SEPTEMBER, 1917

Compiled from reports of operators filed with

Federal Trade Commission

Approved: H. A. Garfield
U. S. Fuel Administrator

Date

Committee

Date: April 5, 1918

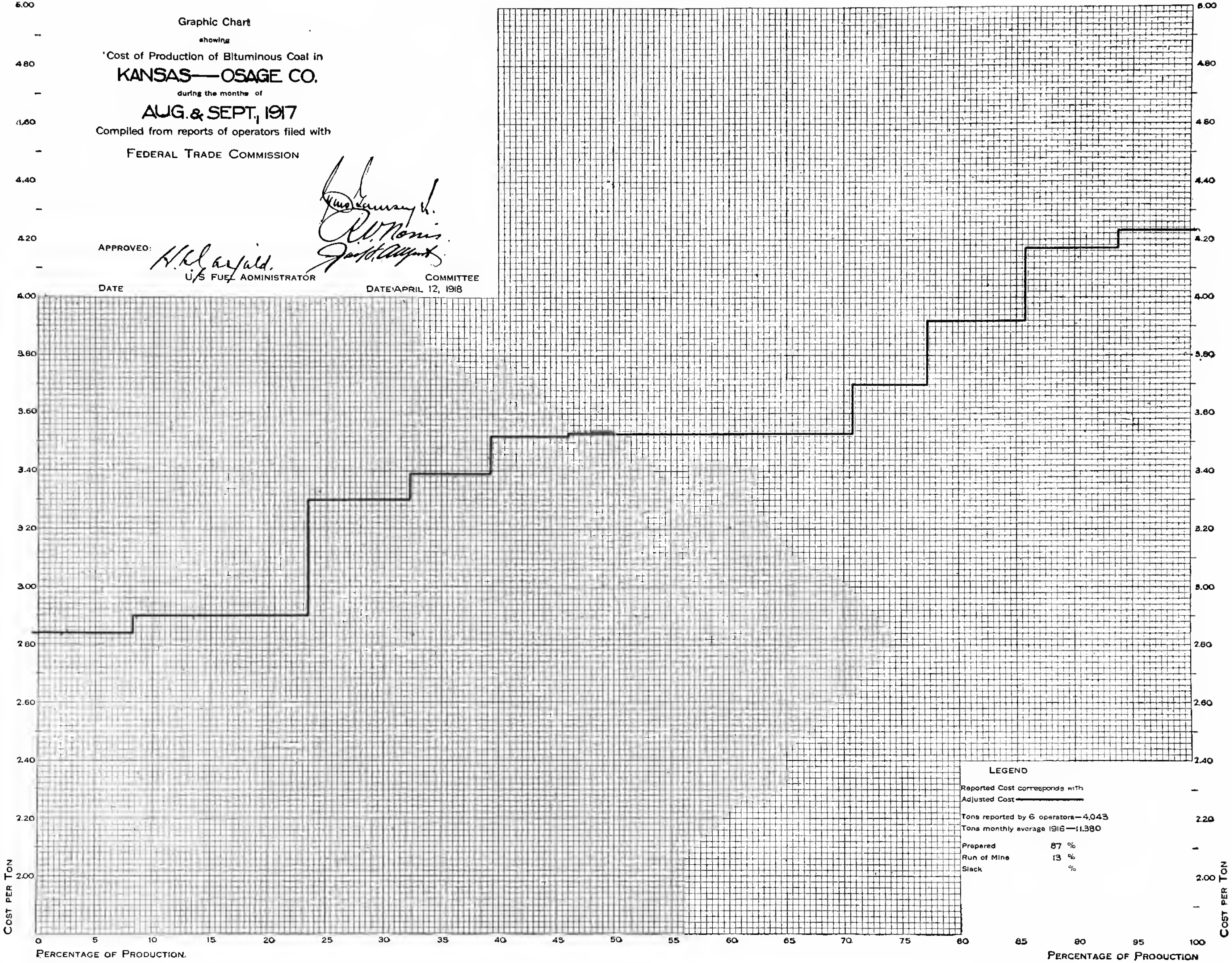
UNITED STATES FUEL ADMINISTRATION

No 56

Graphic Chart
showing
'Cost of Production of Bituminous Coal in
KANSAS—OSAGE CO.
during the months of
AUG. & SEPT., 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U/S FUEL ADMINISTRATOR
DATE

R. V. Norris.
J. H. Allport.
COMMITTEE
DATE APRIL 12, 1918



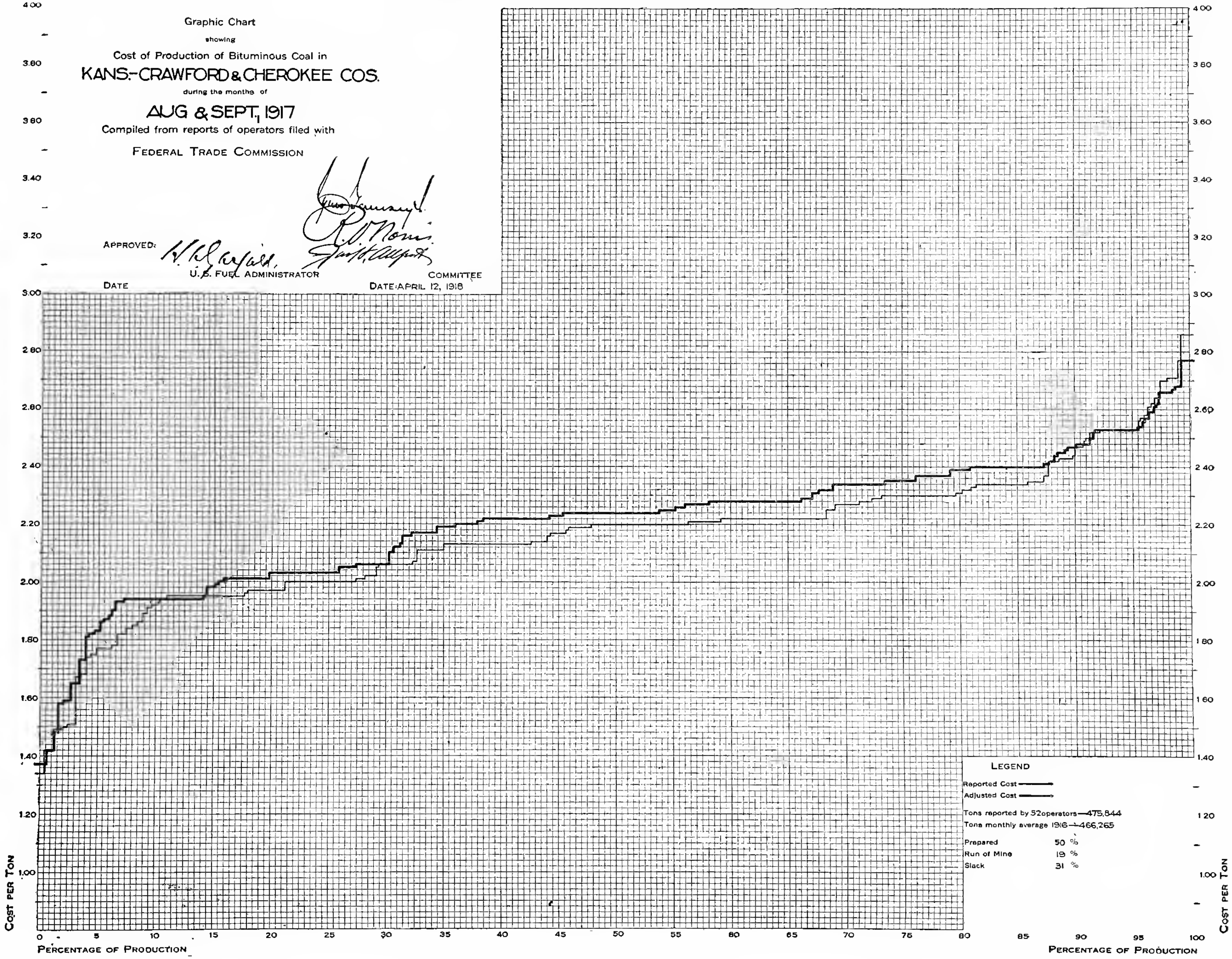
UNITED STATES FUEL ADMINISTRATION

No. 57

Graphic Chart
showing
Cost of Production of Bituminous Coal in
KANS.-CRAWFORD & CHEROKEE COS.
during the months of
AUG & SEPT., 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield,
U. S. FUEL ADMINISTRATOR
DATE

R. V. Norris.
Jas. H. Allport
COMMITTEE
DATE: APRIL 12, 1918



LEGEND
Reported Cost ——
Adjusted Cost ——
Tons reported by 52 operators—475,844
Tons monthly average 1916—466,265

Prepared	50 %
Run of Mine	19 %
Slack	31 %

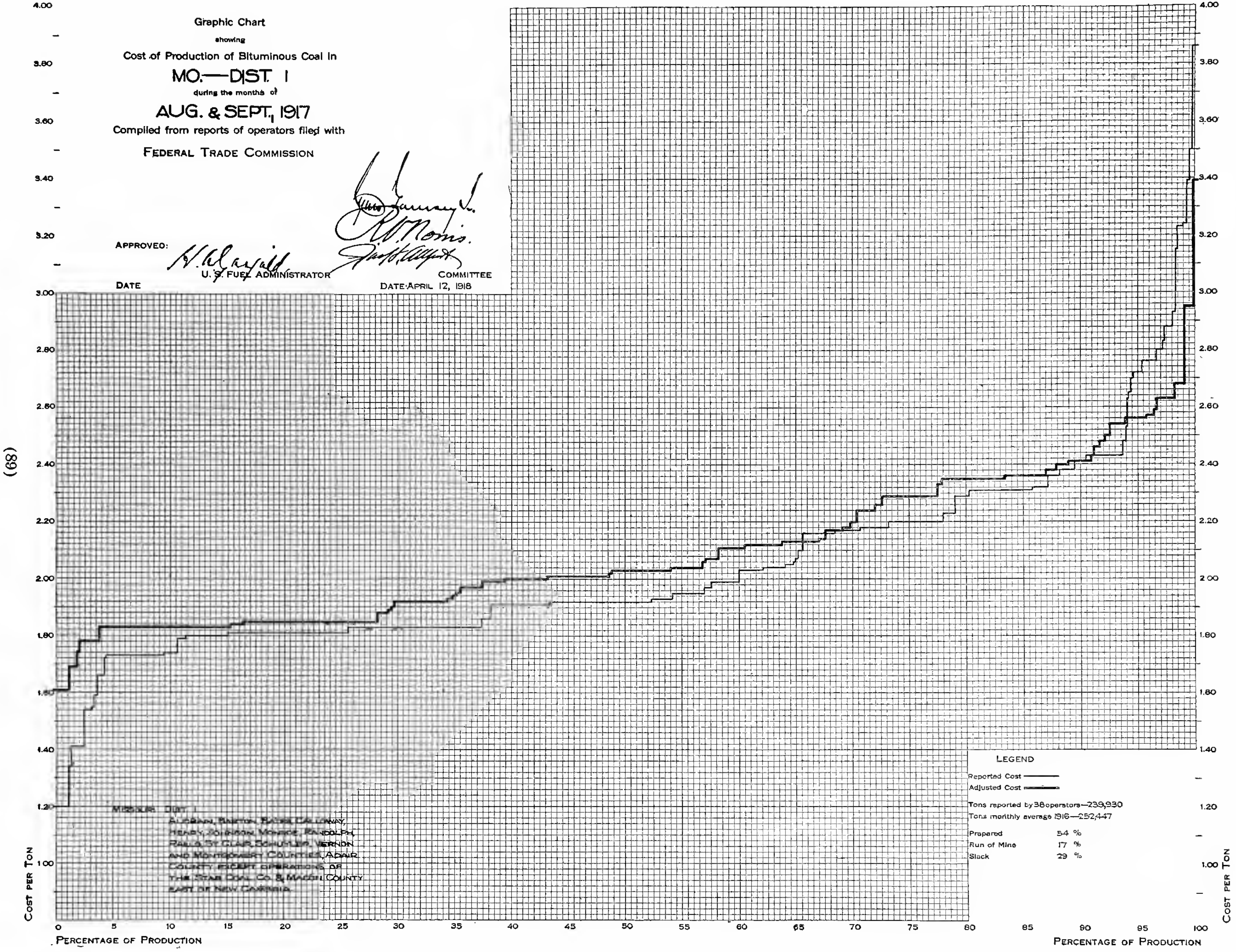
UNITED STATES FUEL ADMINISTRATION

No. 58

Graphic Chart
showing
Cost of Production of Bituminous Coal in
MO.—DIST. 1
during the months of
AUG. & SEPT., 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield
U. S. FUEL ADMINISTRATOR
DATE

R. V. Norris
COMMITTEE
DATE: APRIL 12, 1918



MISSOURI DIST. 1
AUDRAIN, BARTON, BATES, CALLOWAY,
HENRY, JOHNSON, MONROE, RANDOLPH,
RALLS, ST. CLAIR, SCHUYLER, VERNON
AND MONTGOMERY COUNTIES, ADAIR
COUNTY, EXCEPT OPERATIONS OF
THE STAR COAL CO. & MACON COUNTY
EAST OF NEW CAMBRIA.

Tons reported by 38 operators—239,930
Tons monthly average 1916—252,447

Prepared	54 %
Run of Mine	17 %
Slack	29 %

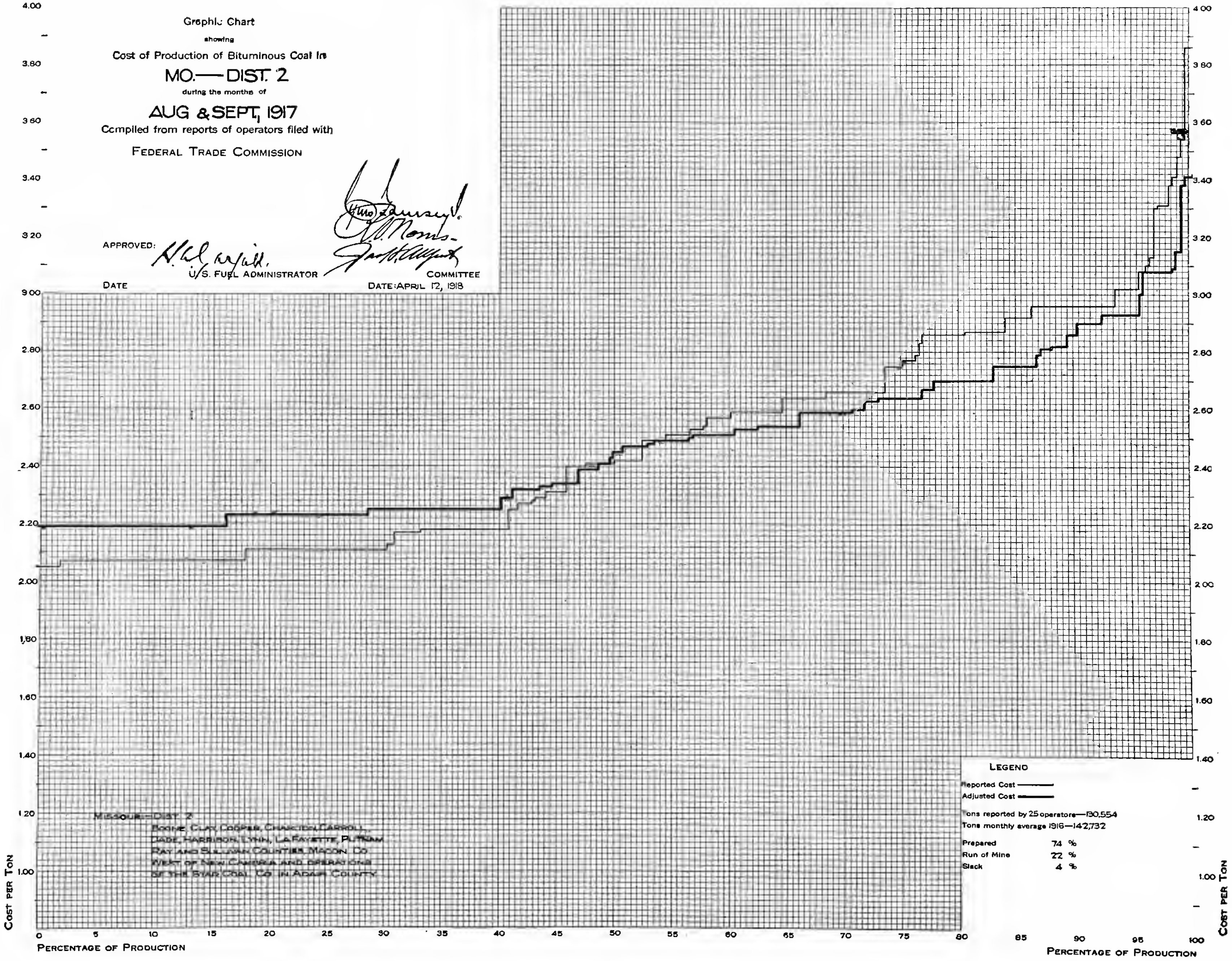
UNITED STATES FUEL ADMINISTRATION

No. 59

Graphic Chart
showing
Cost of Production of Bituminous Coal in
MO.—DIST. 2
during the months of
AUG & SEPT, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U.S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE: APRIL 12, 1918



MISSOURI—DIST. 2
BOONE, CLAY, COOPER, CHARITON, CARROLL,
DADE, HARRISON, LYNN, LAFAYETTE, PUTNAM
RAY AND SULLIVAN COUNTIES, MACON CO.
WEST OF NEW CAMBRIA AND OPERATIONS
OF THE STAR COAL CO. IN ADAIR COUNTY

LEGEND

Reported Cost ————
Adjusted Cost ━━━━

Tons reported by 25 operators—130,554
Tons monthly average 1916—142,732

Prepared	74 %
Run of Mine	22 %
Slack	4 %

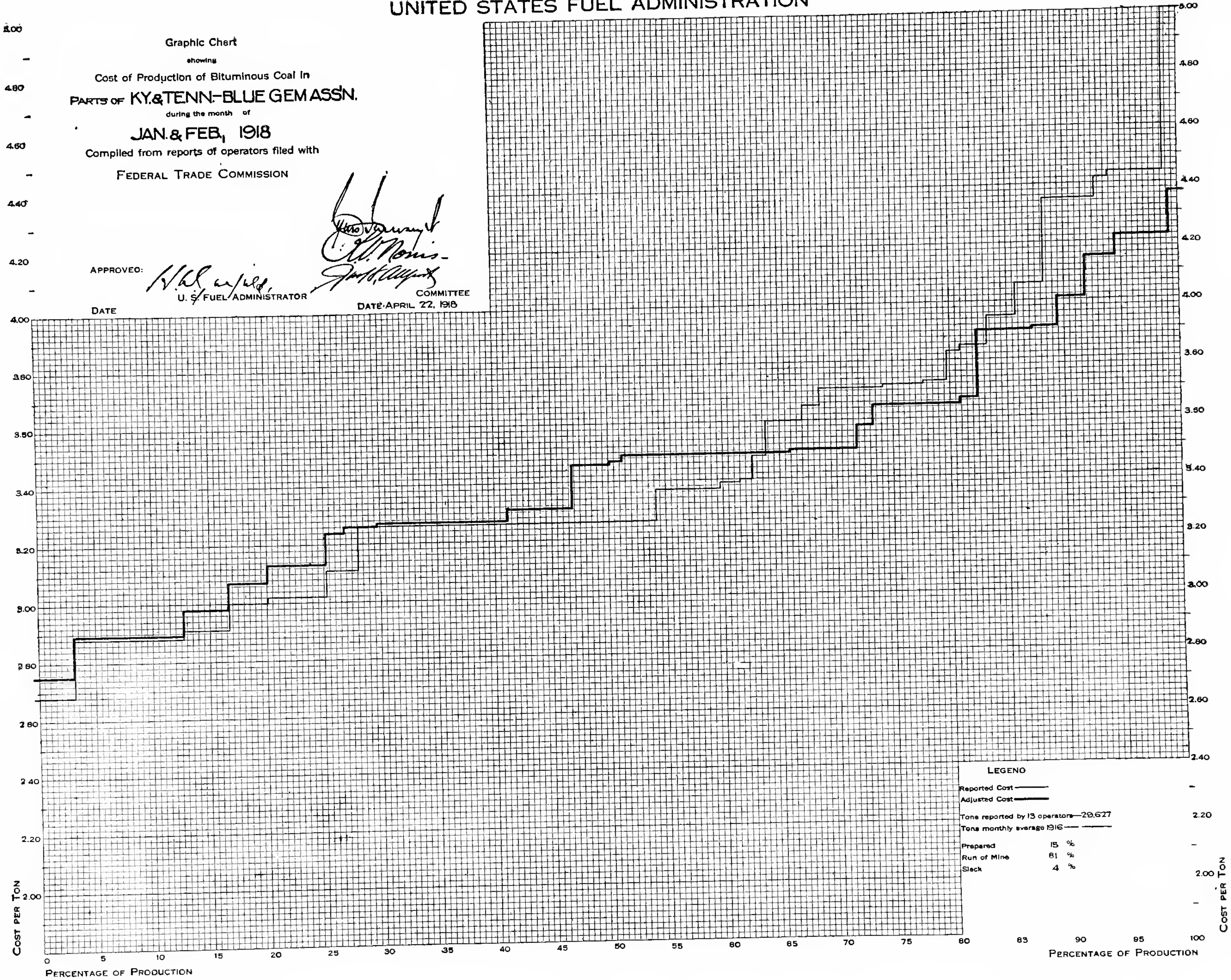
UNITED STATES FUEL ADMINISTRATION

No. 60

Graphic Chart
showing
Cost of Production of Bituminous Coal in
PARTS OF KY. & TENN.-BLUE GEM ASS'N.
during the month of
JAN. & FEB., 1918
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

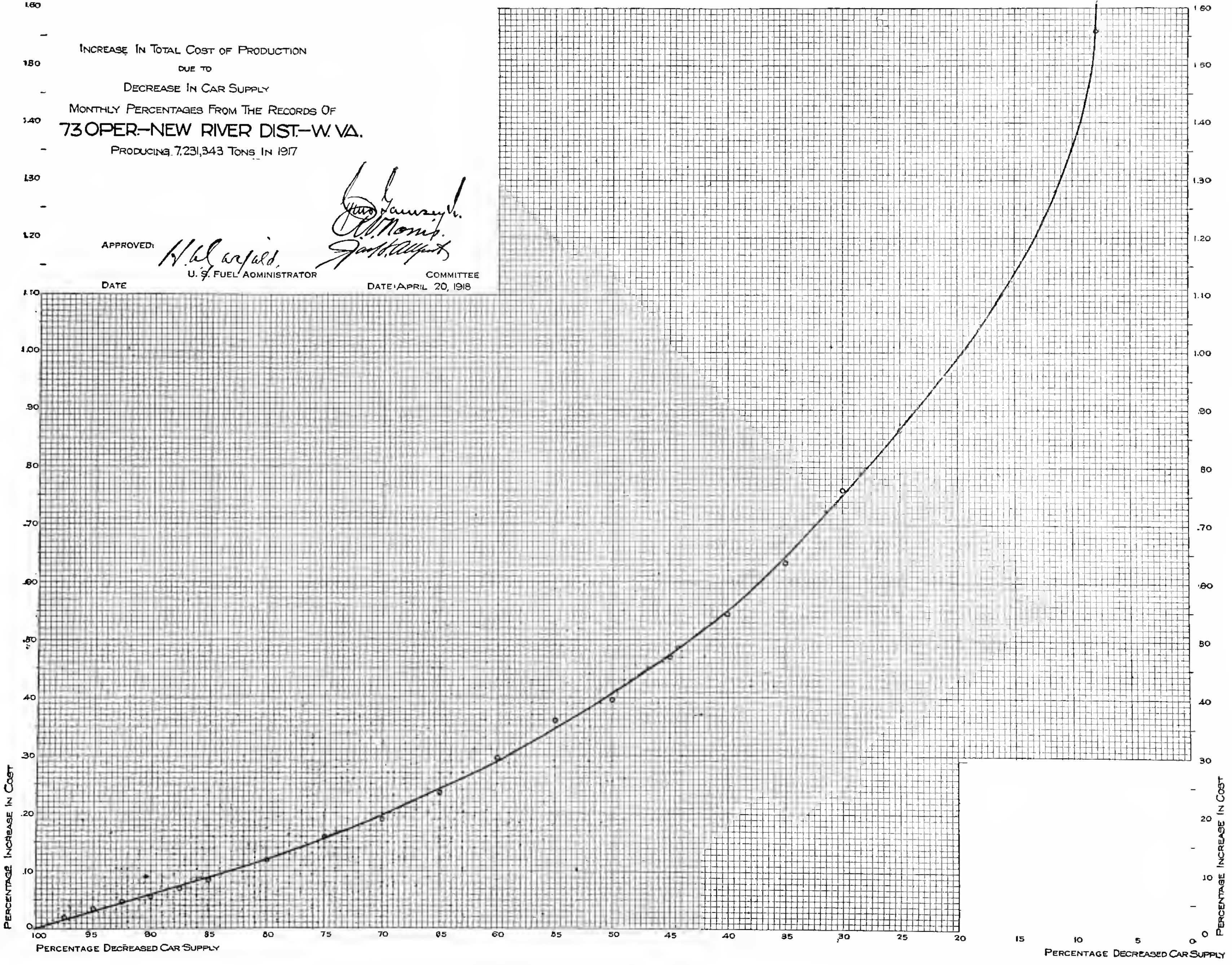
APPROVED: H. A. Garfield,
U. S. FUEL ADMINISTRATOR
DATE

C. W. Morris
COMMITTEE
DATE APRIL 22, 1918



UNITED STATES FUEL ADMINISTRATION

No. 61



INCREASE IN TOTAL COST OF PRODUCTION
DUE TO
DECREASE IN CAR SUPPLY
MONTHLY PERCENTAGES FROM THE RECORDS OF
73 OPER.–NEW RIVER DIST.–W. VA.
PRODUCING 7,231,343 TONS IN 1917

APPROVED: H. A. Garfield
U. S. FUEL ADMINISTRATOR

DATE

COMMITTEE
DATE: APRIL 20, 1918

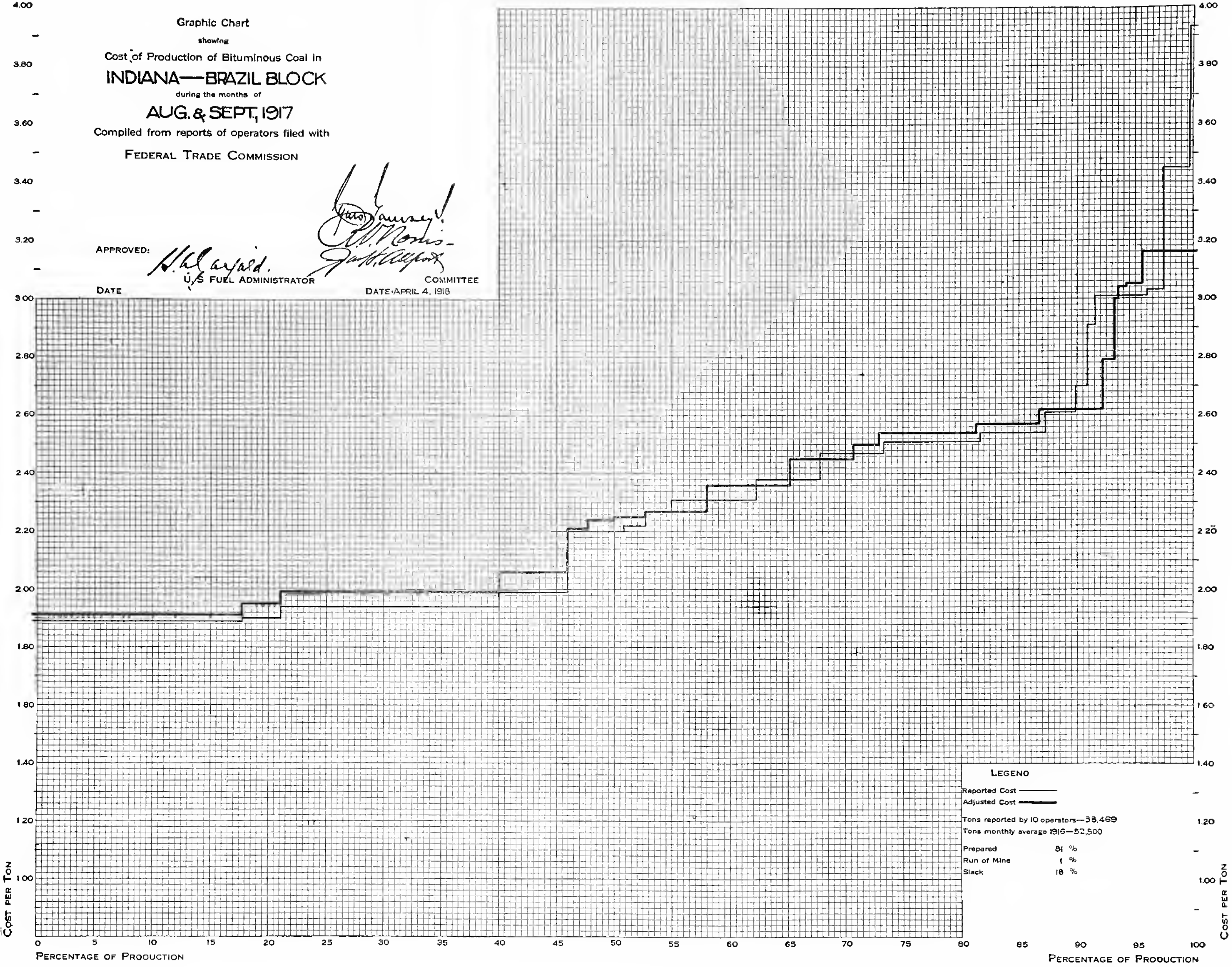
UNITED STATES FUEL ADMINISTRATION

No. 62

Graphic Chart
showing
Cost of Production of Bituminous Coal in
INDIANA—BRAZIL BLOCK
during the months of
AUG. & SEPT., 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE: APRIL 4, 1918



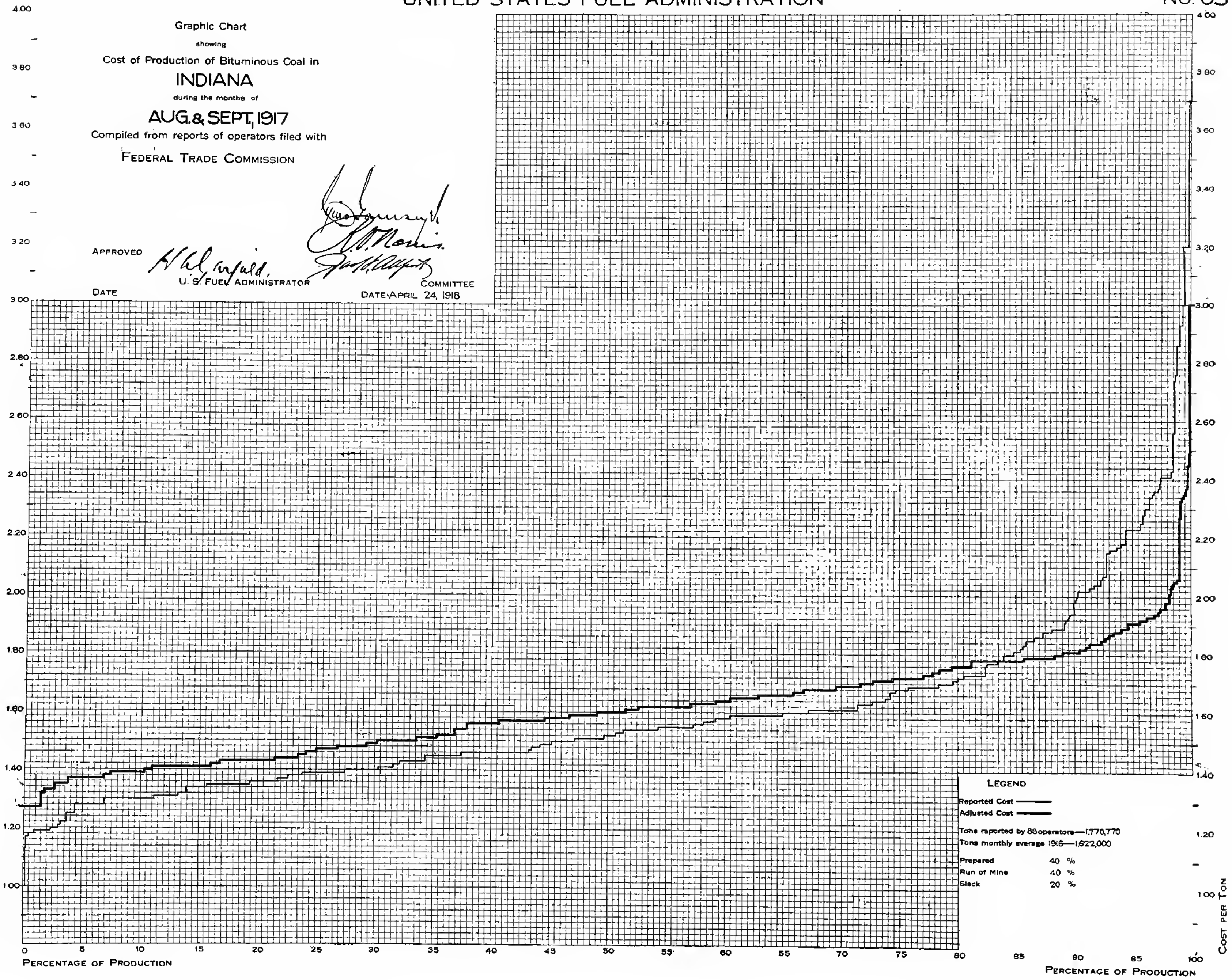
UNITED STATES FUEL ADMINISTRATION

No. 63

Graphic Chart
showing
Cost of Production of Bituminous Coal in
INDIANA
during the months of
AUG. & SEPT., 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED H. A. Garfield.
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE APRIL 24, 1918



LEGEND
Reported Cost
Adjusted Cost
Tons reported by 88 operators—1,770,770
Tons monthly average 1916—1,622,000
Prepared 40 %
Run of Mine 40 %
Slack 20 %

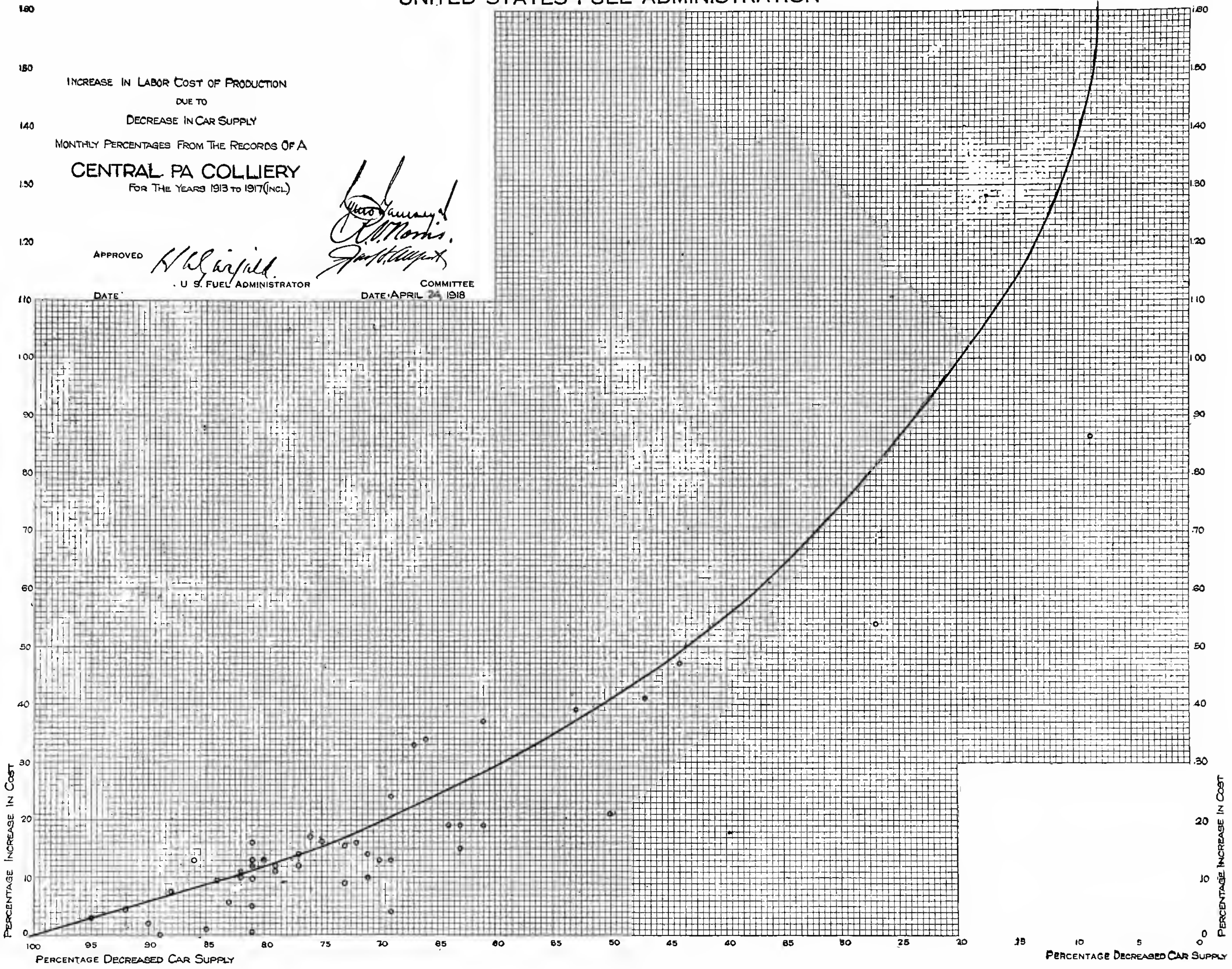
UNITED STATES FUEL ADMINISTRATION

No. 64

INCREASE IN LABOR COST OF PRODUCTION
DUE TO
DECREASE IN CAR SUPPLY
MONTHLY PERCENTAGES FROM THE RECORDS OF A
CENTRAL PA COLLIERY
FOR THE YEARS 1913 TO 1917 (INCL)

APPROVED H. A. Garfield.
U. S. FUEL ADMINISTRATOR
DATE

C. M. Morris.
COMMITTEE
DATE: APRIL 24, 1918



UNITED STATES FUEL ADMINISTRATION

No. 65

Costs, 1917

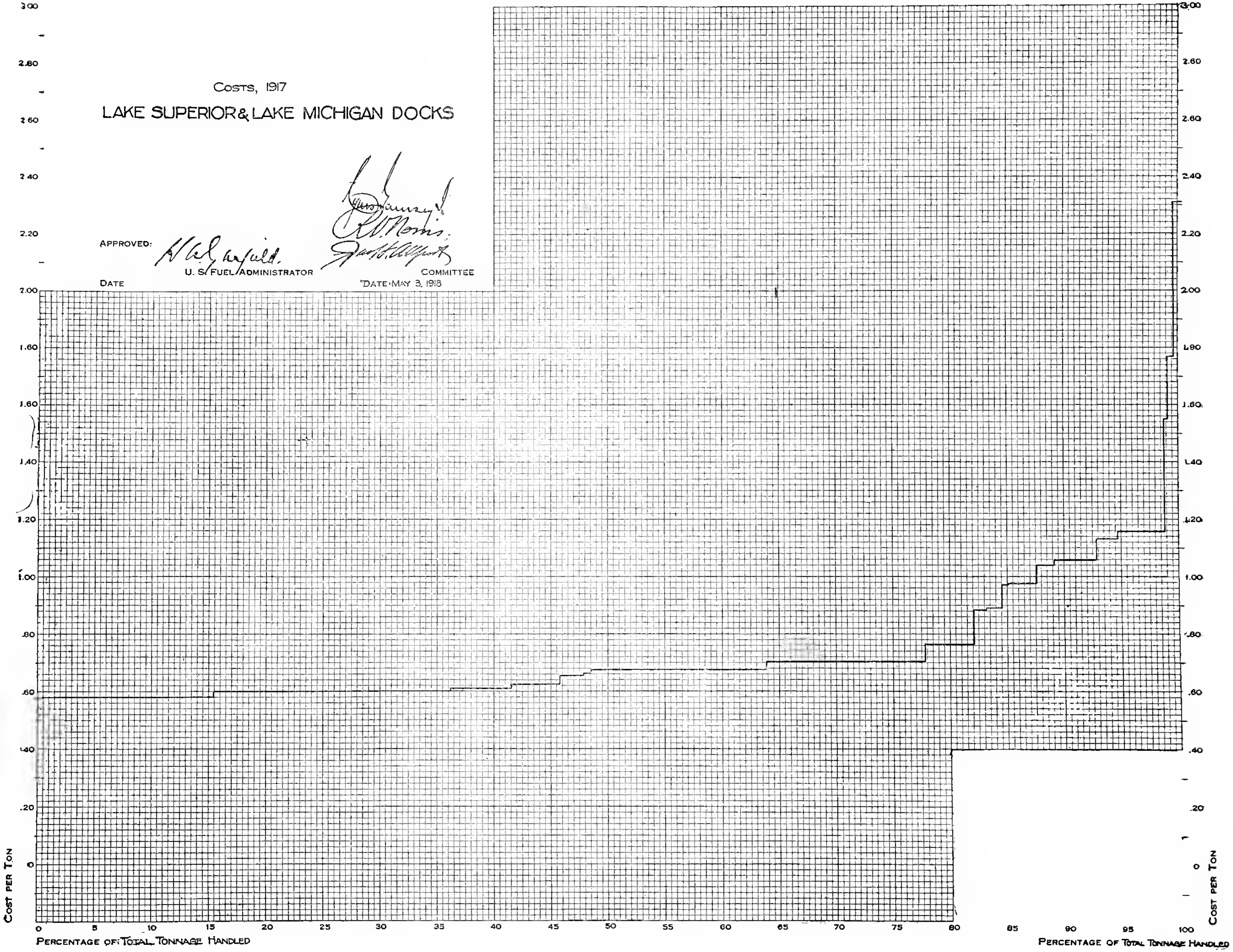
LAKE SUPERIOR & LAKE MICHIGAN DOCKS

APPROVED: H. A. Garfield
U. S. FUEL ADMINISTRATOR

DATE

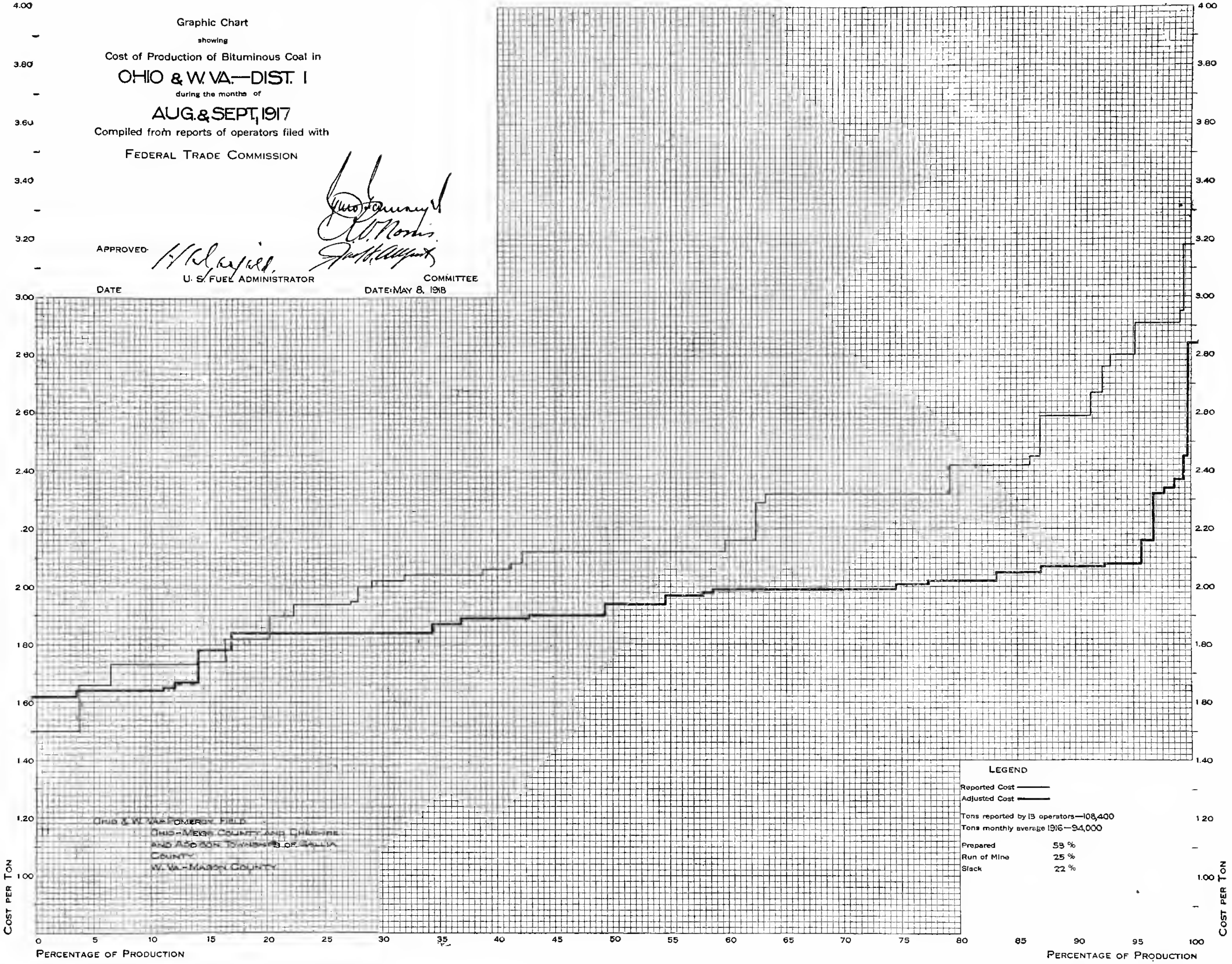
R. V. Norris
COMMITTEE

DATE·MAY 3, 1918



UNITED STATES FUEL ADMINISTRATION

No. 66



Graphic Chart
showing
Cost of Production of Bituminous Coal in
OHIO & W. VA.—DIST. I
during the months of
AUG. & SEPT., 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

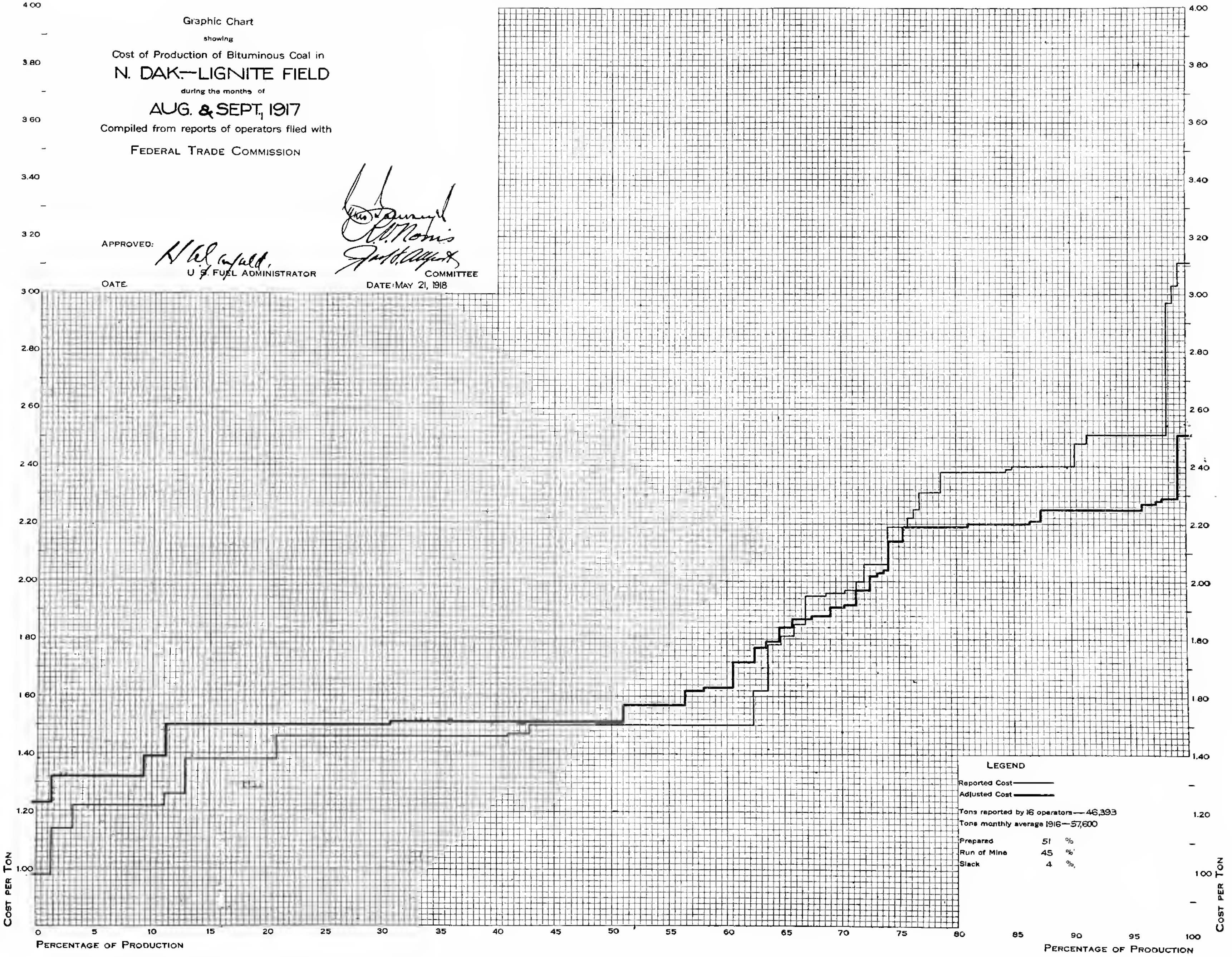
APPROVED H A Garfield
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE: MAY 8, 1918

OHIO & W. VA.—POMEROY FIELD
OHIO—MEIGS COUNTY AND CHESHIRE AND ADDISON TOWNSHIPS OF GALLIA COUNTY.
W. VA.—MASON COUNTY.

UNITED STATES FUEL ADMINISTRATION

No. 67



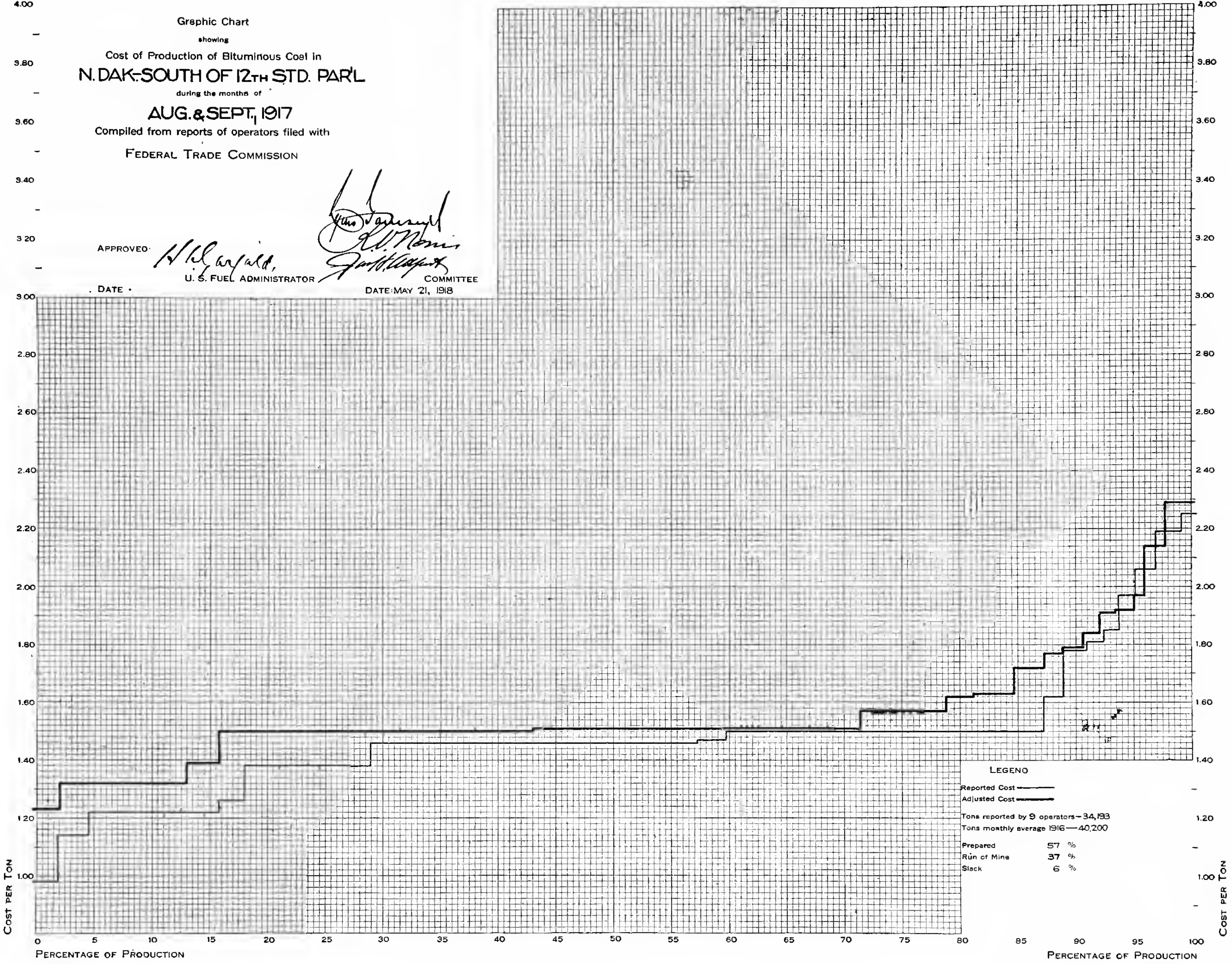
Graphic Chart
showing
Cost of Production of Bituminous Coal in
N. DAK.—LIGNITE FIELD
during the months of
AUG. & SEPT., 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H A Garfield,
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE: MAY 21, 1918

UNITED STATES FUEL ADMINISTRATION

No 68



Graphic Chart
showing
Cost of Production of Bituminous Coal in
N. DAK-SOUTH OF 12TH STD. PAR'L
during the months of
AUG. & SEPT., 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield,
U. S. FUEL ADMINISTRATOR
DATE:

R. V. Norris
COMMITTEE
DATE: MAY 21, 1918

Tons reported by 9 operators—34,193
Tons monthly average 1916—40,200

Prepared	57 %
Run of Mine	37 %
Slack	6 %

UNITED STATES FUEL ADMINISTRATION

No. 69

Graphic Chart
showing
Cost of Production of Bituminous Coal in

N. DAK.—NORTH OF 12TH STD. PARL.

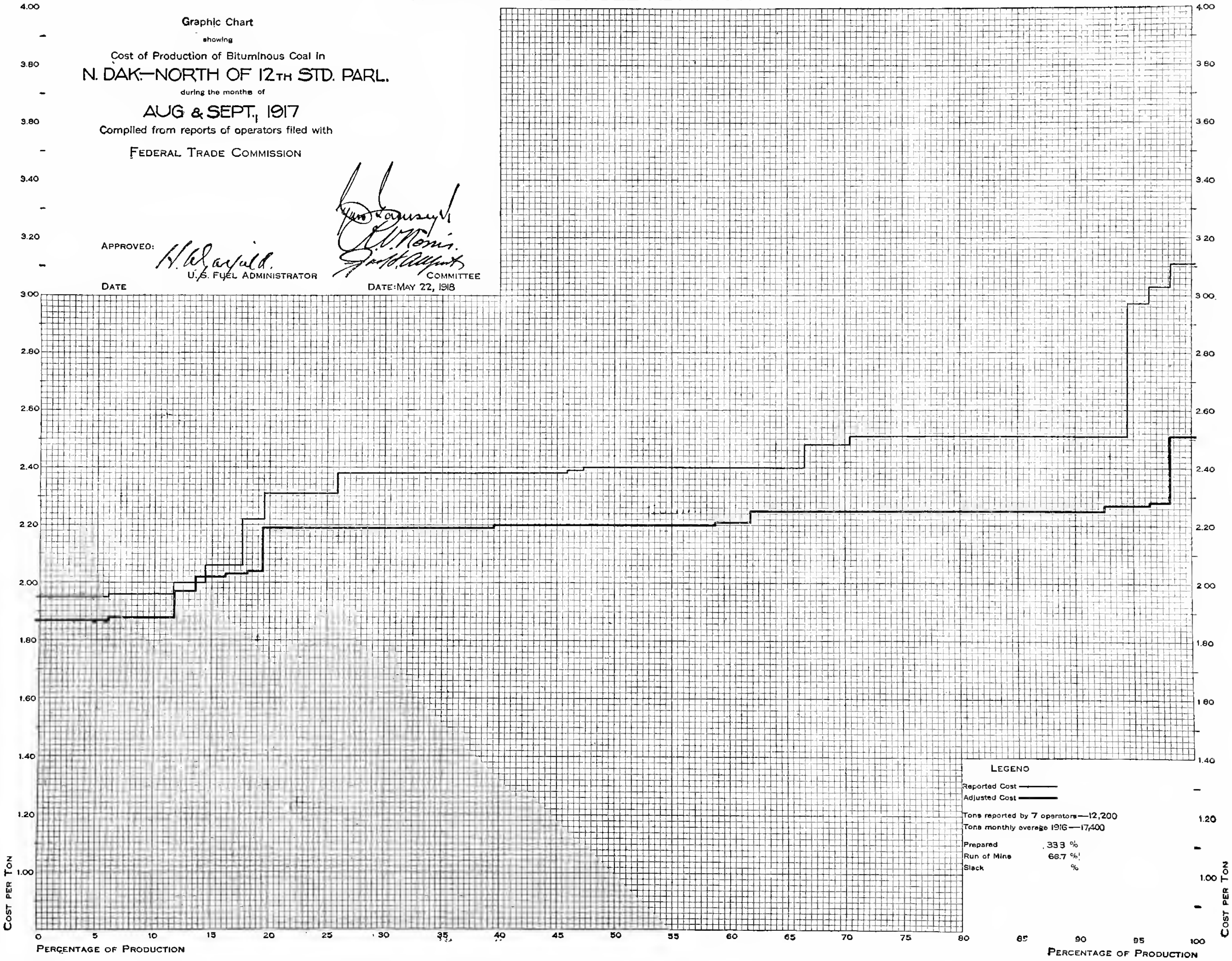
during the months of

AUG & SEPT., 1917

Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE: MAY 22, 1918



Tons reported by 7 operators—12,200
Tons monthly average 1916—17,400

Prepared 33.3 %
Run of Mine 66.7 %
Slack %

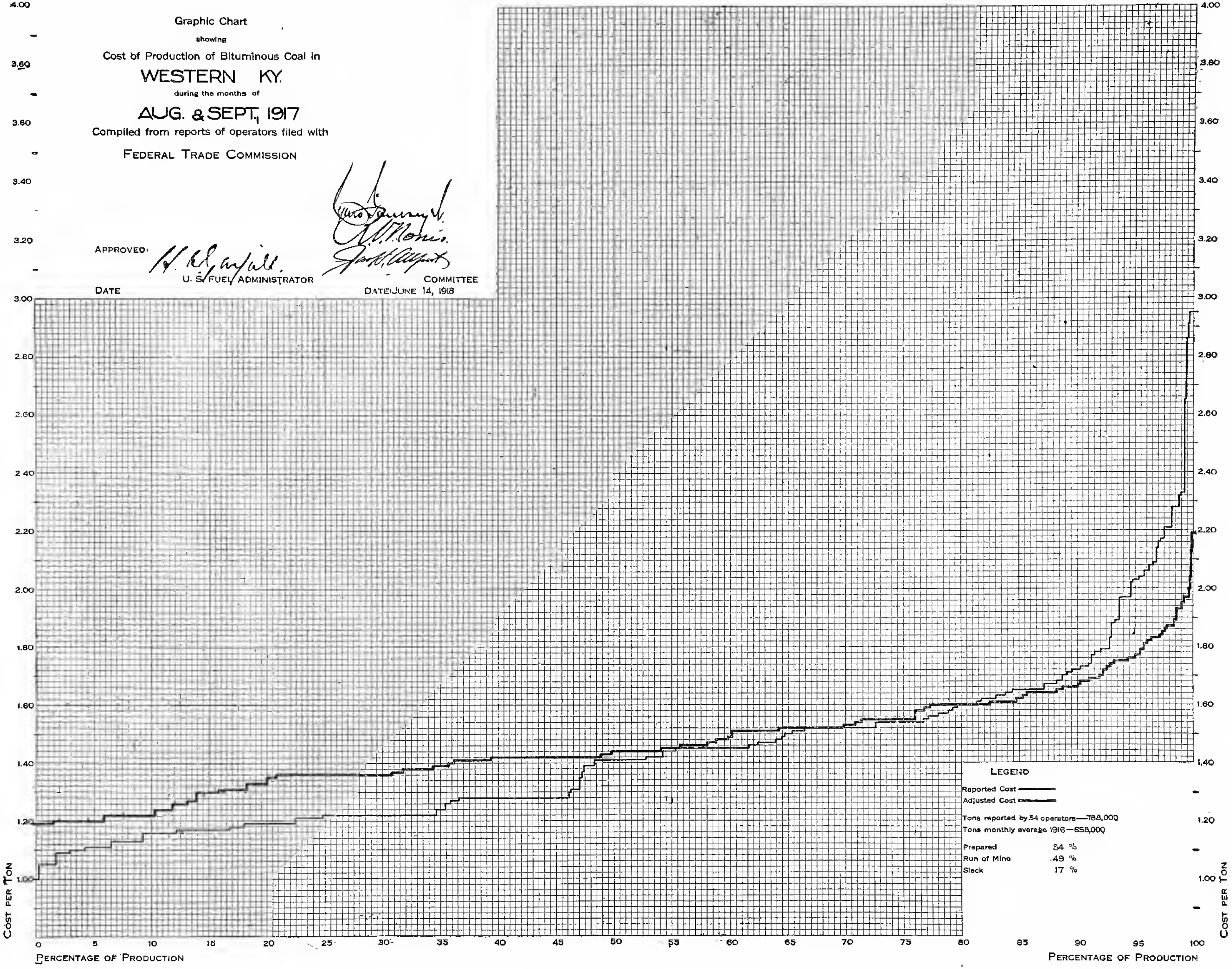
UNITED STATES FUEL ADMINISTRATION

No. 70

Graphic Chart
showing
Cost of Production of Bituminous Coal in
WESTERN KY.
during the months of
AUG. & SEPT., 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR
DATE

Cyrus Garnsey Jr.
Morris
Jas. H. Allport
COMMITTEE
DATE: JUNE 14, 1918



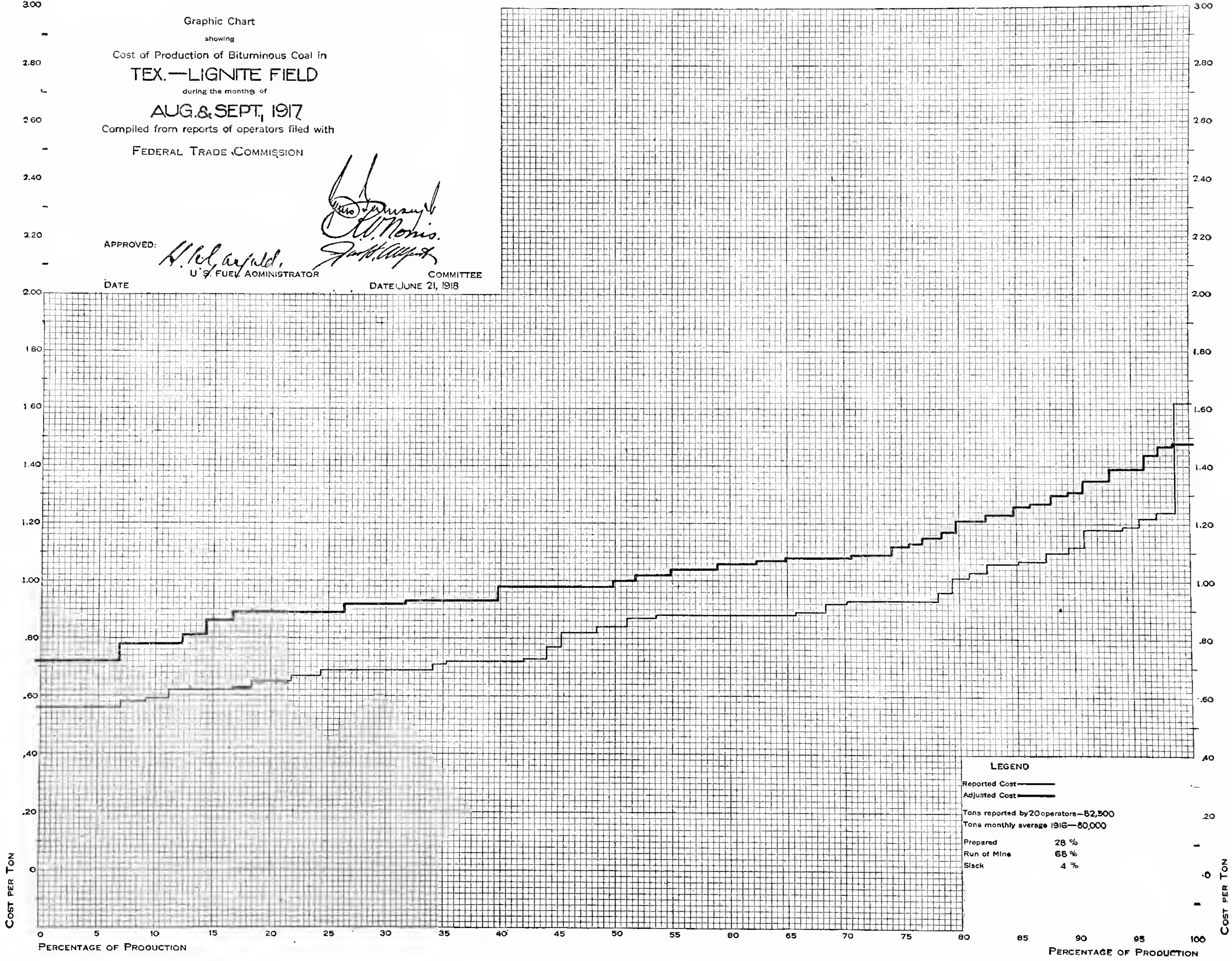
UNITED STATES FUEL ADMINISTRATION

No. 71

Graphic Chart
showing
Cost of Production of Bituminous Coal in
TEX.—LIGNITE FIELD
during the months of
AUG. & SEPT., 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR
DATE

C. W. Morris.
COMMITTEE
DATE: JUNE 21, 1918



Tons reported by 20 operators—82,500
Tons monthly average 1916—80,000

Prepared	28 %
Run of Mine	68 %
Slack	4 %

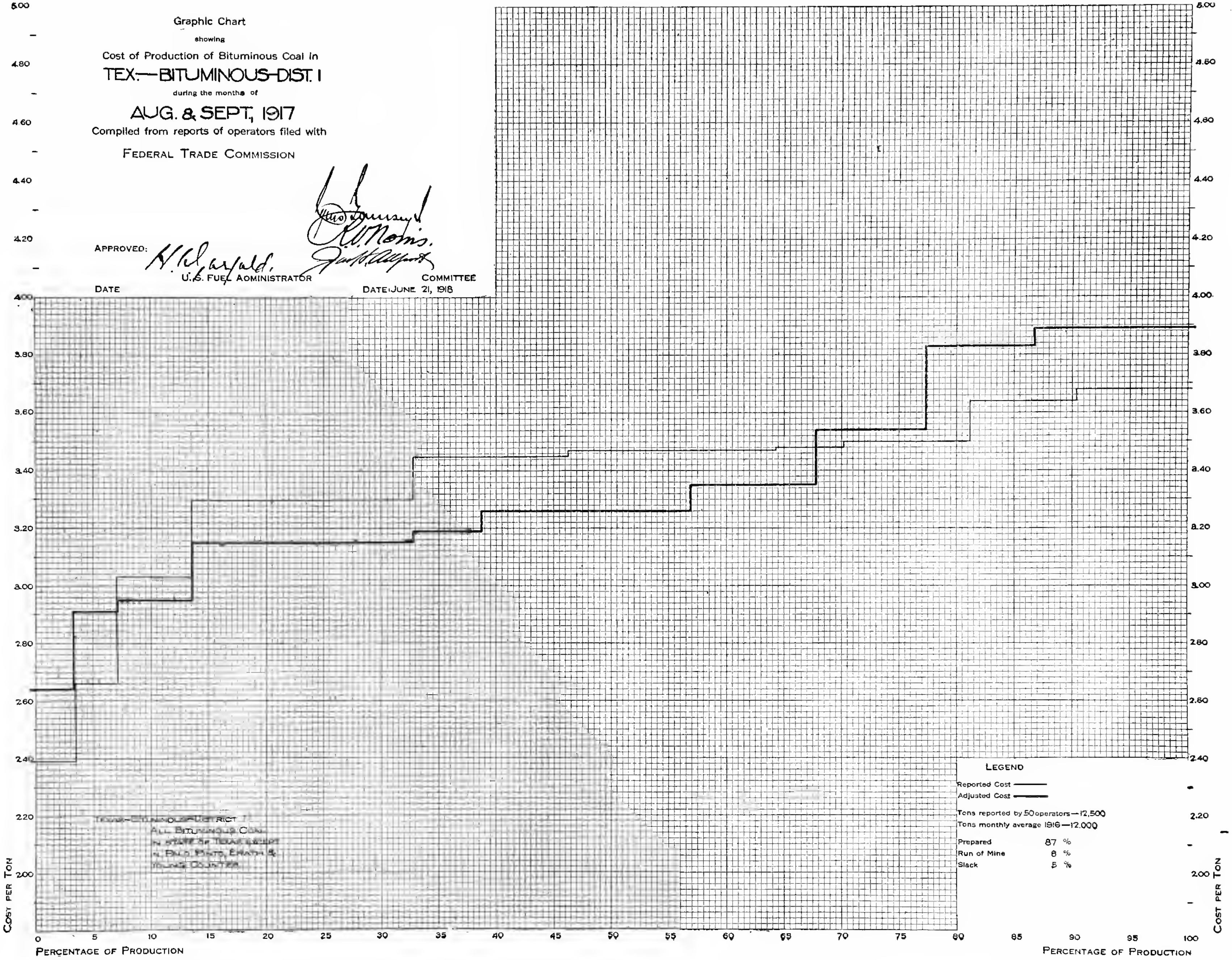
UNITED STATES FUEL ADMINISTRATION

No. 72

Graphic Chart
showing
Cost of Production of Bituminous Coal in
TEX.—BITUMINOUS-DIST. I
during the months of
AUG. & SEPT., 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

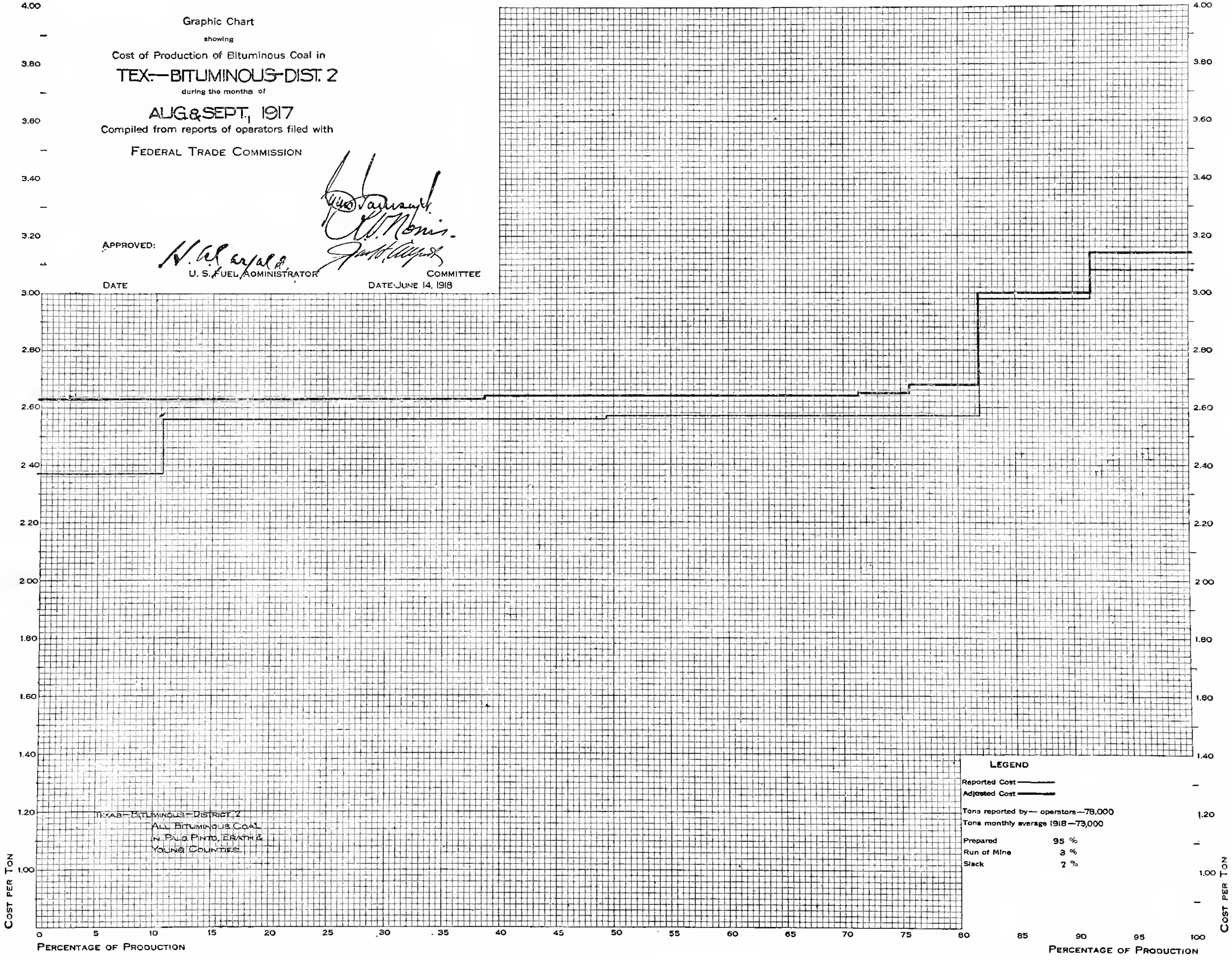
APPROVED: H. A. Garfield
U. S. FUEL ADMINISTRATOR
DATE

R. V. Norris.
COMMITTEE
DATE: JUNE 21, 1918



UNITED STATES FUEL ADMINISTRATION

No. 73



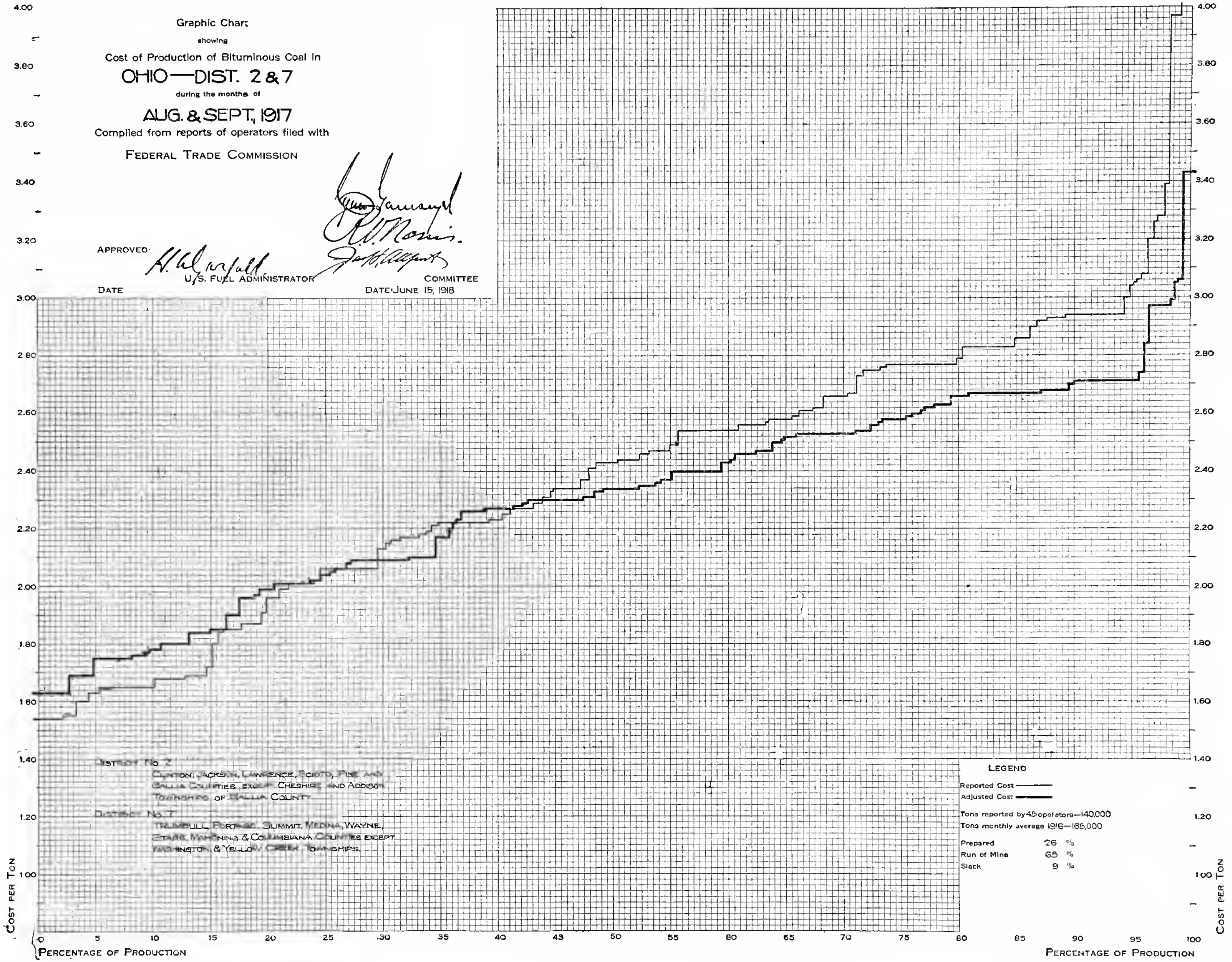
Graphic Chart
showing
Cost of Production of Bituminous Coal in
TEX.—BITUMINOUS—DIST. 2
during the months of
AUG.&SEPT., 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield
U. S. FUEL ADMINISTRATOR
DATE

C. W. Morris.
COMMITTEE
DATE JUNE 14, 1918

UNITED STATES FUEL ADMINISTRATION

No. 74



Graphic Chart
showing
Cost of Production of Bituminous Coal in
OHIO—DIST. 2 & 7
during the months of
AUG. & SEPT., 1917
Compiled from reports of operators filed with
Federal Trade Commission

Approved: H. A. Garfield
U. S. Fuel Administrator
Date

R. V. Norris
Jas. H. Allport
Committee
Date: June 15, 1918

District No. 2
Clinton, Jackson, Lawrence, Scioto, Pike and Gallia Counties except Cheshire and Addison Townships of Gallia County.

District No. 7
Trumbull, Portage, Summit, Medina, Wayne, Stark, Mahoning & Columbiana Counties except Washington & Yellow Creek Townships.

Legend
Reported Cost ———
Adjusted Cost ▬▬▬

Tons reported by 45 operators—140,000
Tons monthly average 1916—165,000

Prepared	26 %
Run of Mine	65 %
Slack	9 %

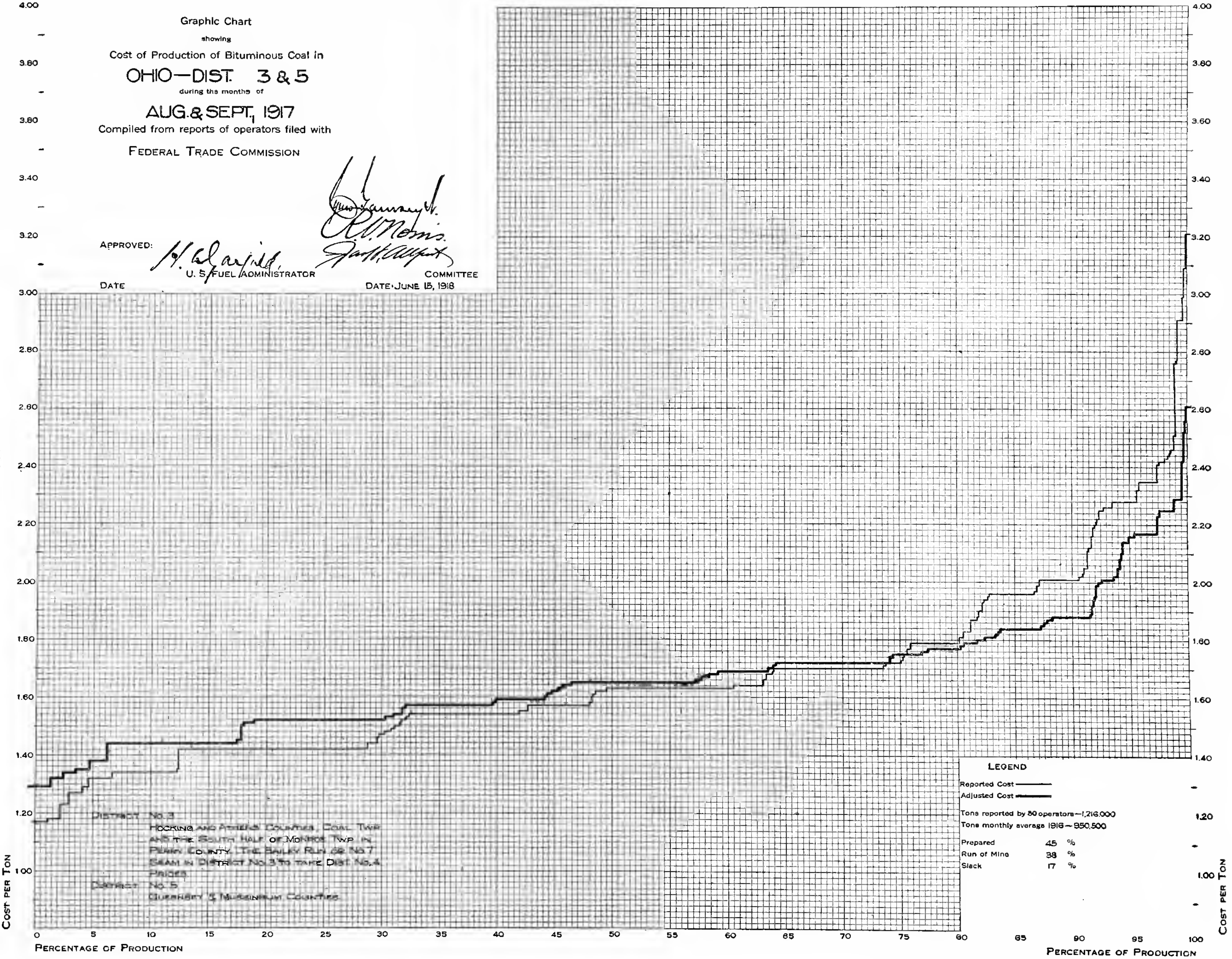
UNITED STATES FUEL ADMINISTRATION

No. 75

Graphic Chart
showing
Cost of Production of Bituminous Coal in
OHIO—DIST. 3 & 5
during the months of
AUG. & SEPT., 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE: JUNE 15, 1918



District No. 3
Hocking and Athens Counties, Coal Twp. and the South Half of Monroe Twp. in Perry County. The Bailey Run or No. 7 Seam in District No. 3 to take Dist. No. 4 Prices.
District No. 5
Guernsey & Muskingum Counties.

LEGEND
Reported Cost ——
Adjusted Cost ━━

Tons reported by 80 operators—1,216,000
Tons monthly average 1916—950,500

Prepared	45	%
Run of Mine	38	%
Slack	17	%

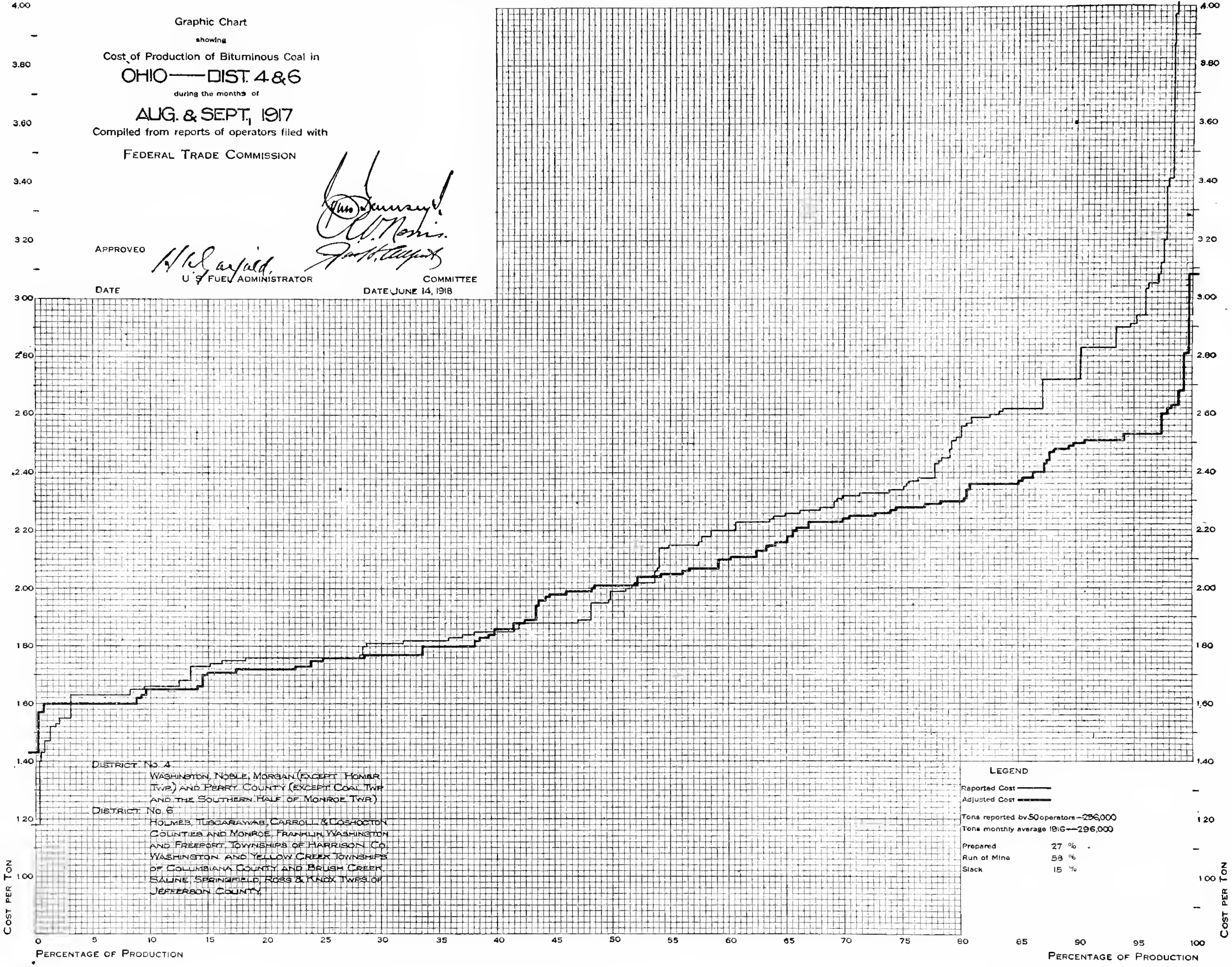
UNITED STATES FUEL ADMINISTRATION

No. 76

Graphic Chart
showing
Cost of Production of Bituminous Coal in
OHIO——DIST. 4 & 6
during the months of
AUG. & SEPT., 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED H. A. Garfield,
U. S. FUEL ADMINISTRATOR
DATE

C. A. Morris.
COMMITTEE
DATE JUNE 14, 1918



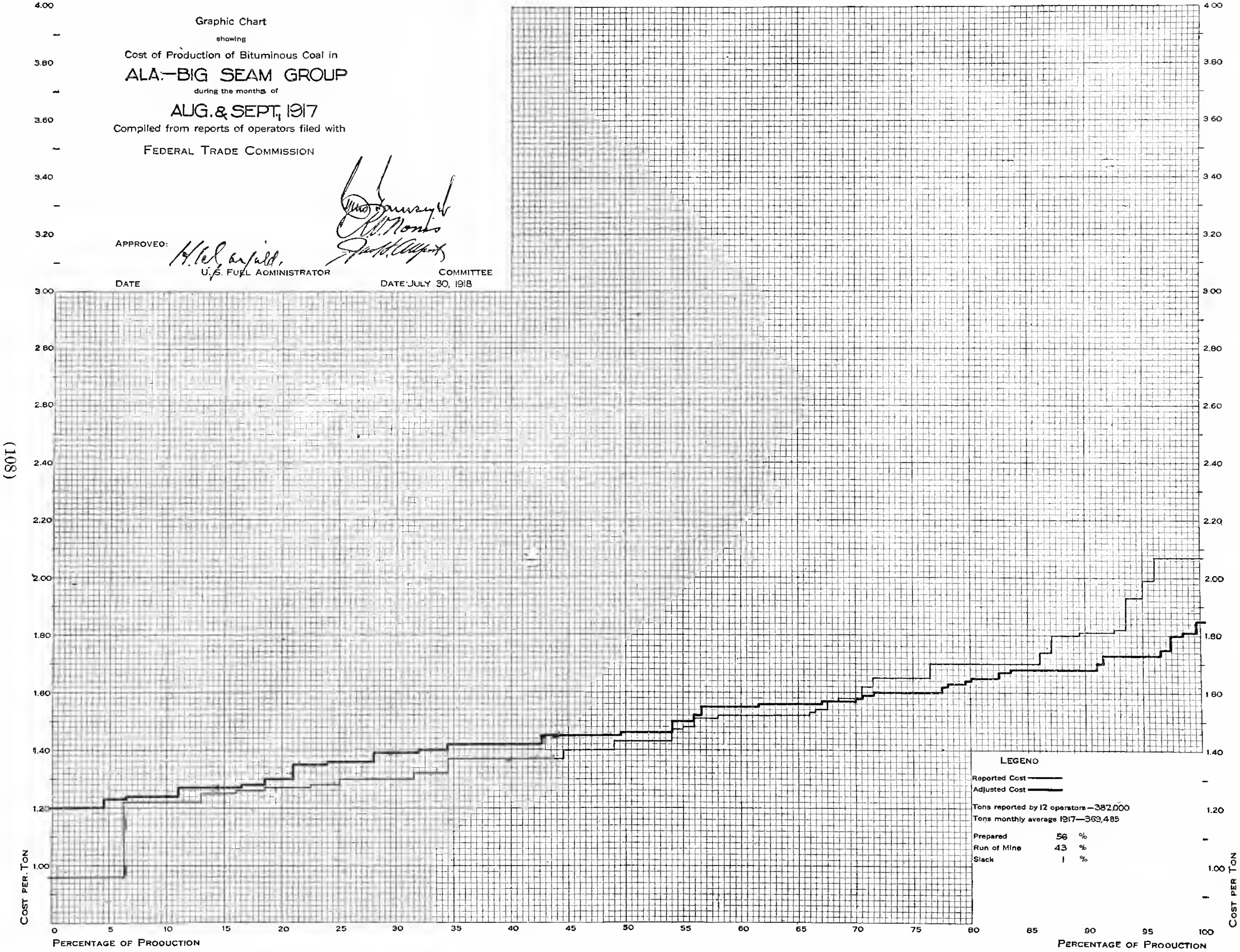
UNITED STATES FUEL ADMINISTRATION

No 77

Graphic Chart
showing
Cost of Production of Bituminous Coal in
ALA.—BIG SEAM GROUP
during the months of
AUG. & SEPT., 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield,
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE: JULY 30, 1918



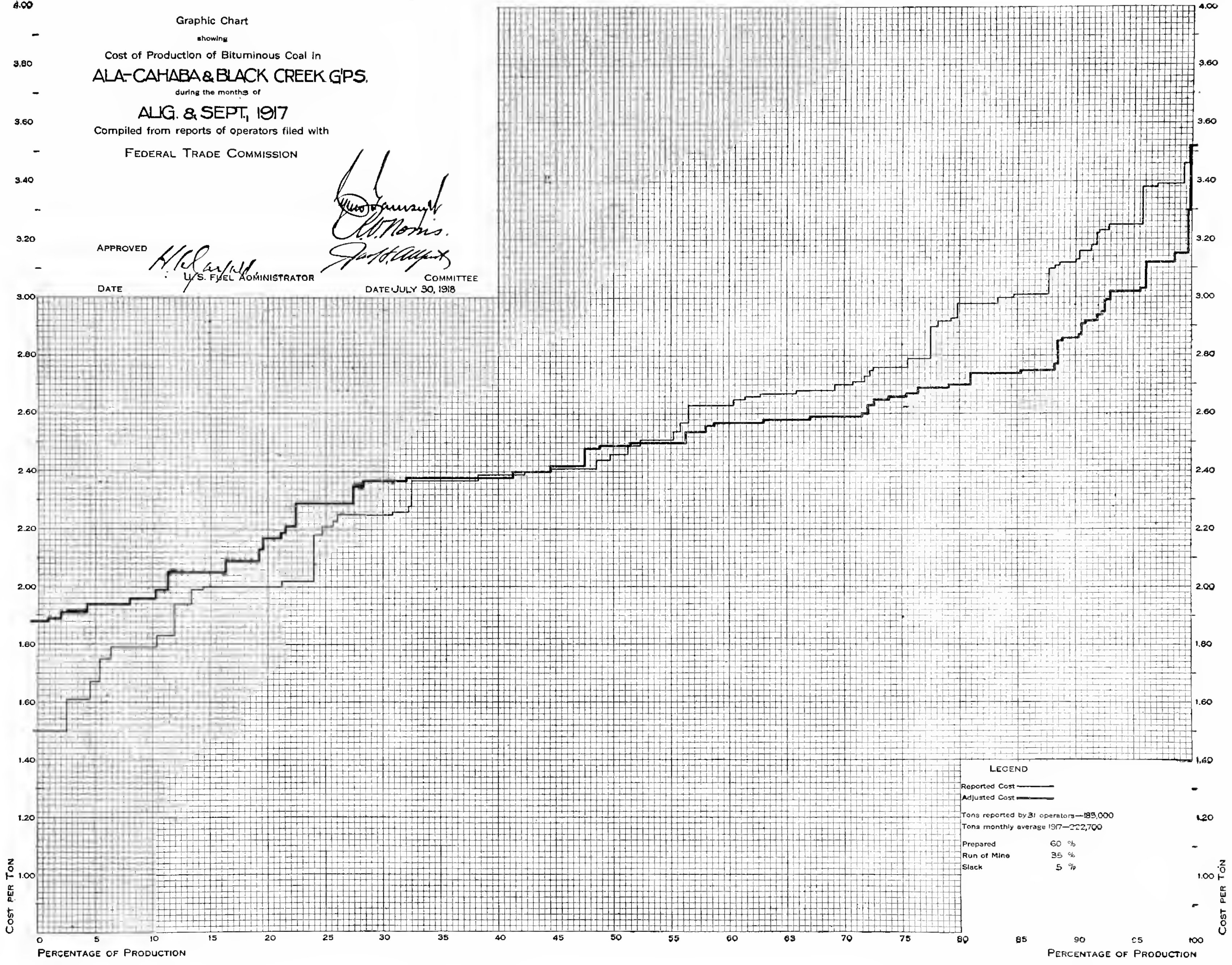
UNITED STATES FUEL ADMINISTRATION

No. 78

Graphic Chart
showing
Cost of Production of Bituminous Coal in
ALA-CAHABA & BLACK CREEK G'PS.
during the months of
AUG. & SEPT., 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED H. A. Garfield
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE JULY 30, 1918



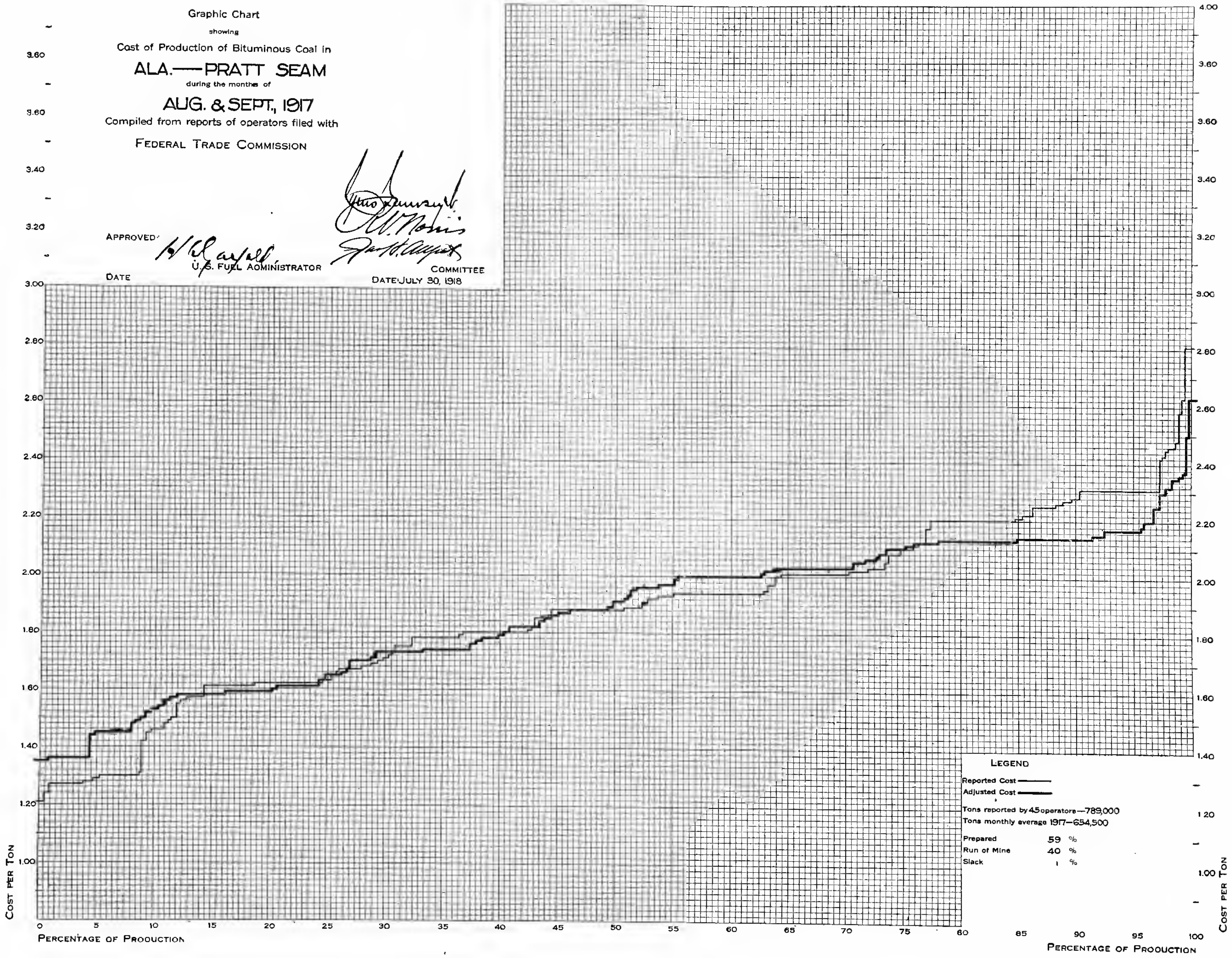
UNITED STATES FUEL ADMINISTRATION

No. 79

Graphic Chart
showing
Cost of Production of Bituminous Coal in
ALA.—PRATT SEAM
during the months of
AUG. & SEPT., 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H A Garfield
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE: JULY 30, 1918



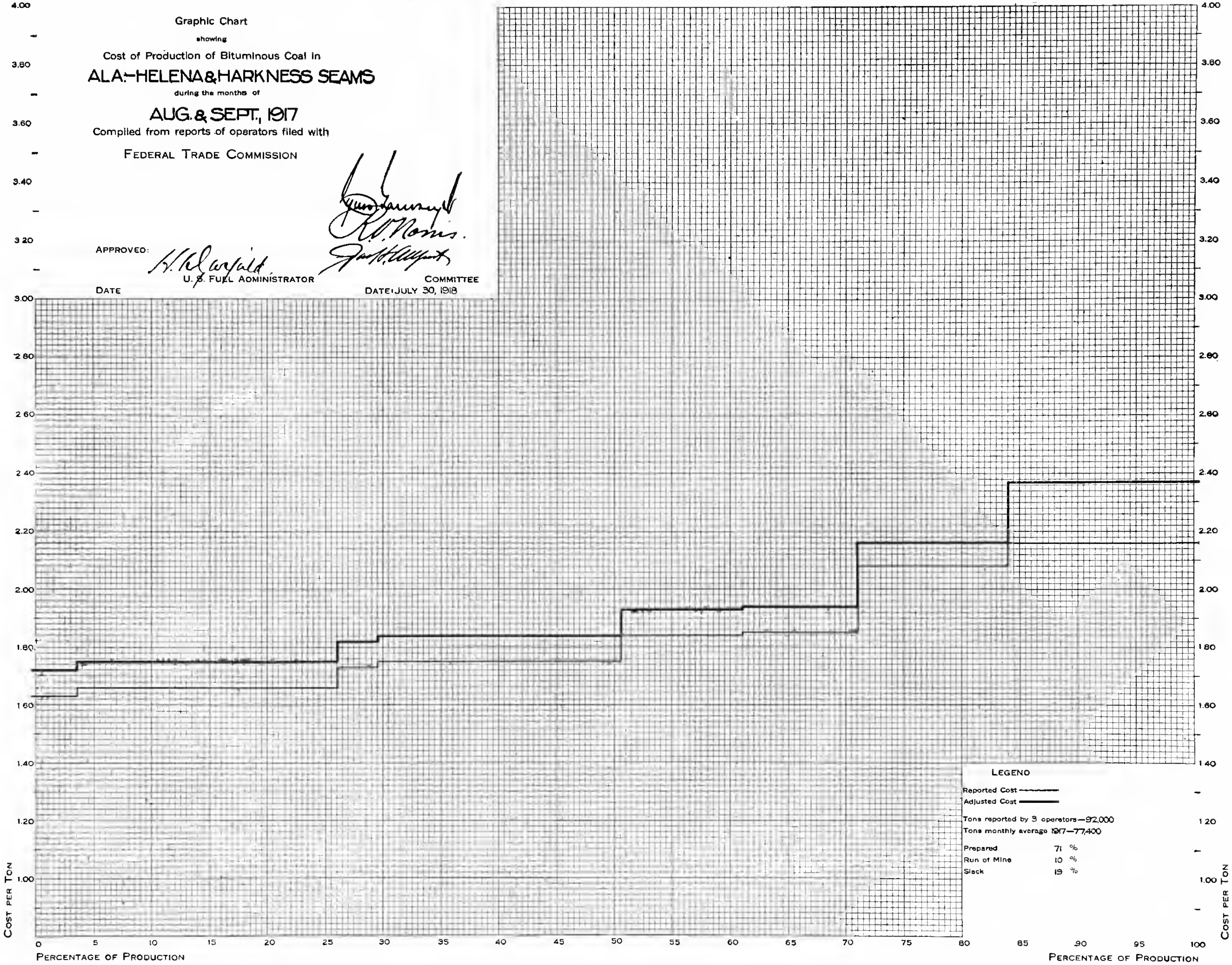
UNITED STATES FUEL ADMINISTRATION

No. 80

Graphic Chart
showing
Cost of Production of Bituminous Coal in
ALA.-HELENA & HARKNESS SEAMS
during the months of
AUG. & SEPT., 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield
U. S. FUEL ADMINISTRATOR
DATE

R. V. Norris.
COMMITTEE
DATE: JULY 30, 1918



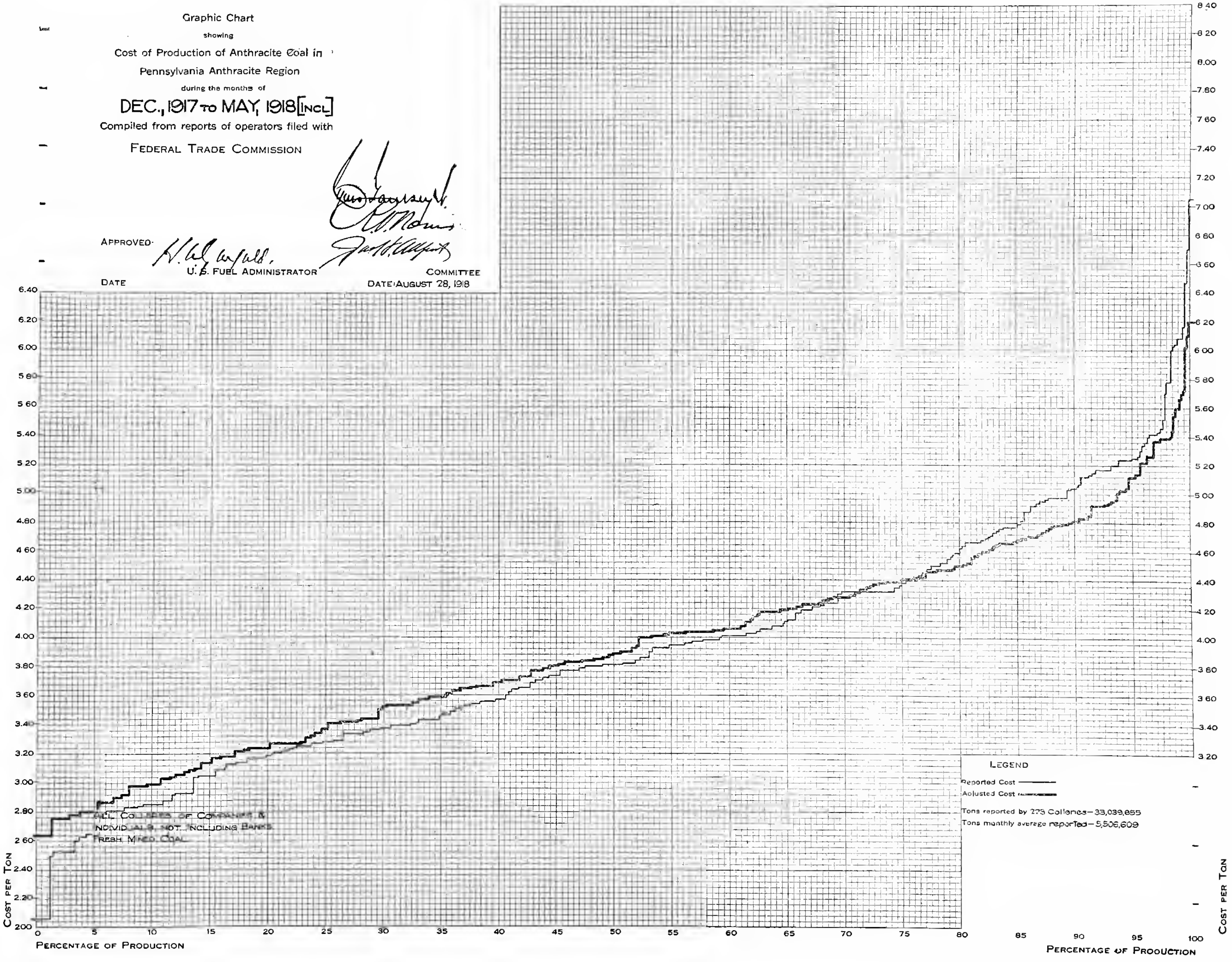
UNITED STATES FUEL ADMINISTRATION

No. 81

Graphic Chart
showing
Cost of Production of Anthracite Coal in
Pennsylvania Anthracite Region
during the months of
DEC., 1917 TO MAY, 1918 [INCL.]
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED· H. A. Garfield.
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE: AUGUST 28, 1918



Tons reported by 273 Collieries—33,039,855
Tons monthly average reported—5,506,609

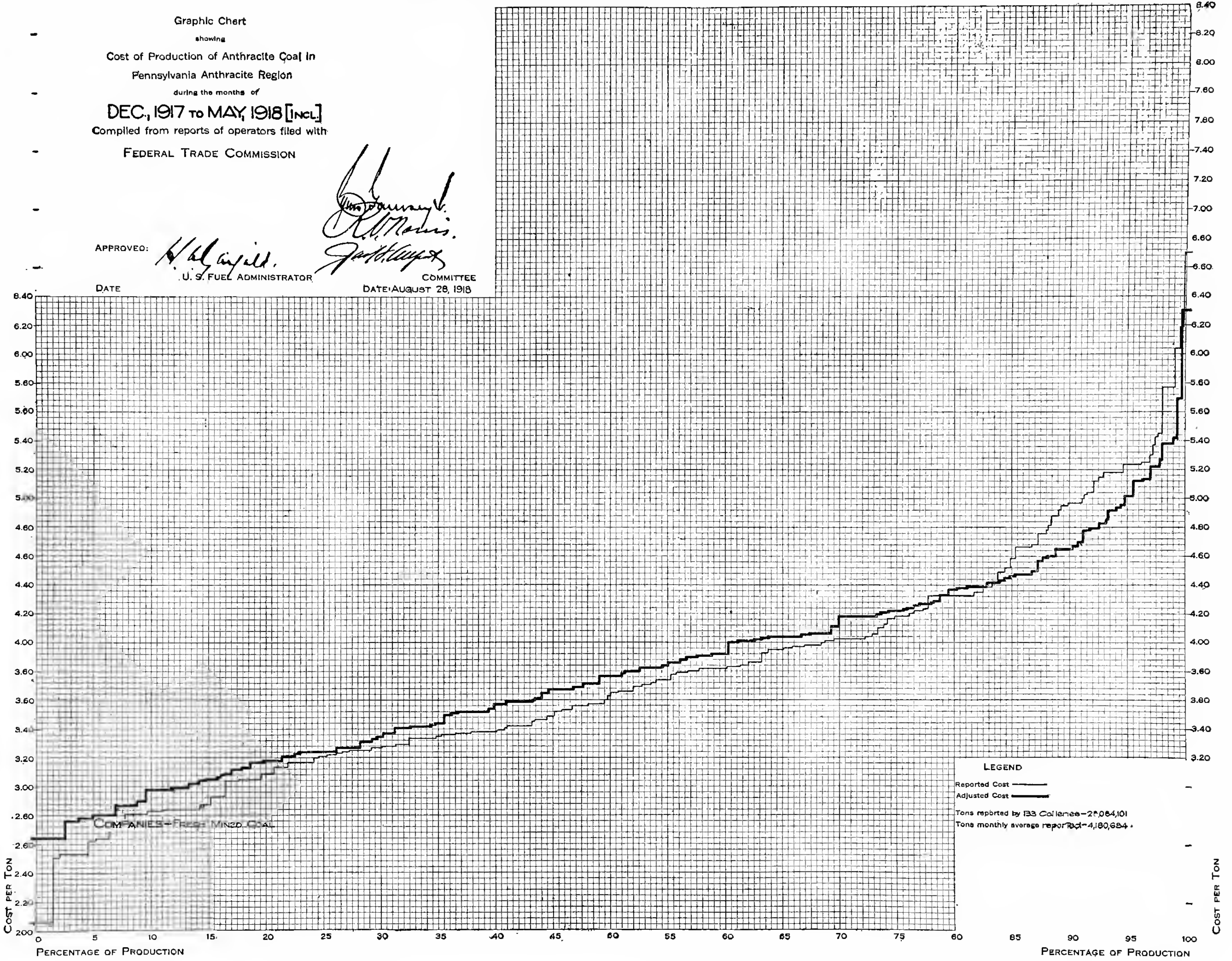
UNITED STATES FUEL ADMINISTRATION

NO. 82

Graphic Chart
showing
Cost of Production of Anthracite Coal in
Pennsylvania Anthracite Region
during the months of
DEC., 1917 TO MAY, 1918 [INCL.]
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE: AUGUST 28, 1918



Tons reported by 133 Collieries—25,084,101
Tons monthly average reported—4,180,684.

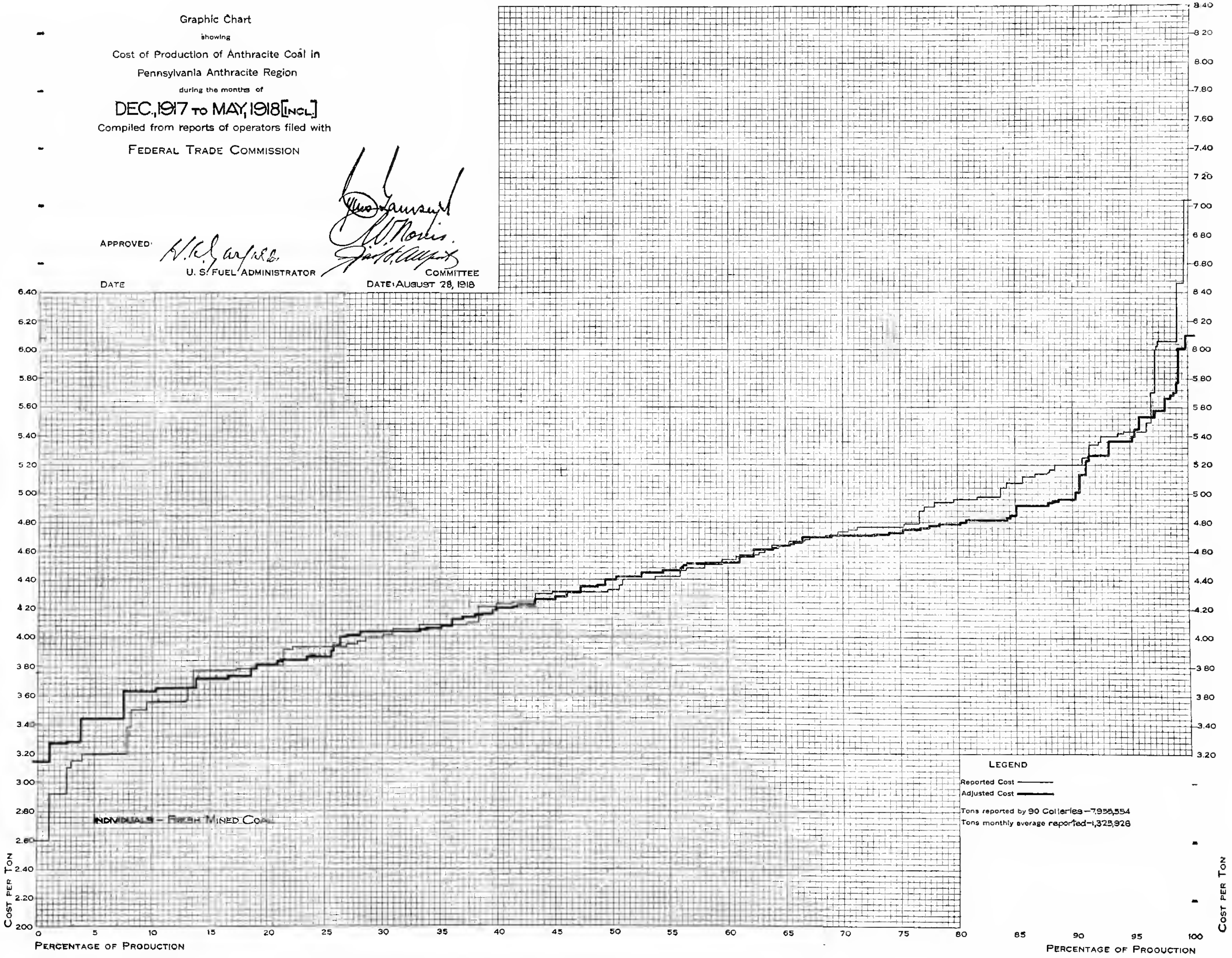
UNITED STATES FUEL ADMINISTRATION

No. 83

Graphic Chart
showing
Cost of Production of Anthracite Coal in
Pennsylvania Anthracite Region
during the months of
DEC., 1917 TO MAY, 1918 [INCL.]
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED:
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE: AUGUST 28, 1918



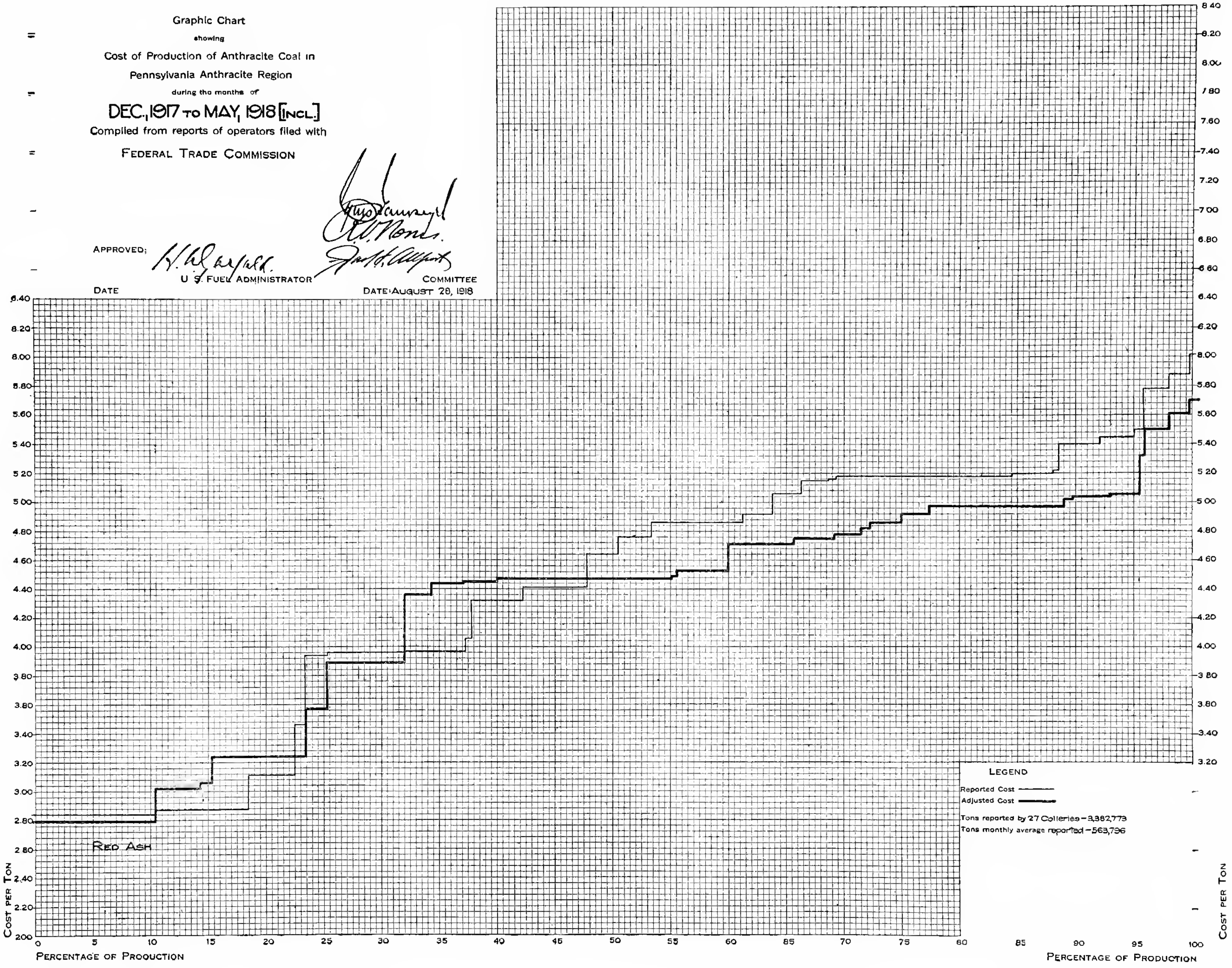
UNITED STATES FUEL ADMINISTRATION

No. 84

Graphic Chart
showing
Cost of Production of Anthracite Coal in
Pennsylvania Anthracite Region
during the months of
DEC., 1917 TO MAY, 1918 [INCL.]
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED; H. A. Garfield
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE: AUGUST 28, 1918



LEGEND

Reported Cost ———

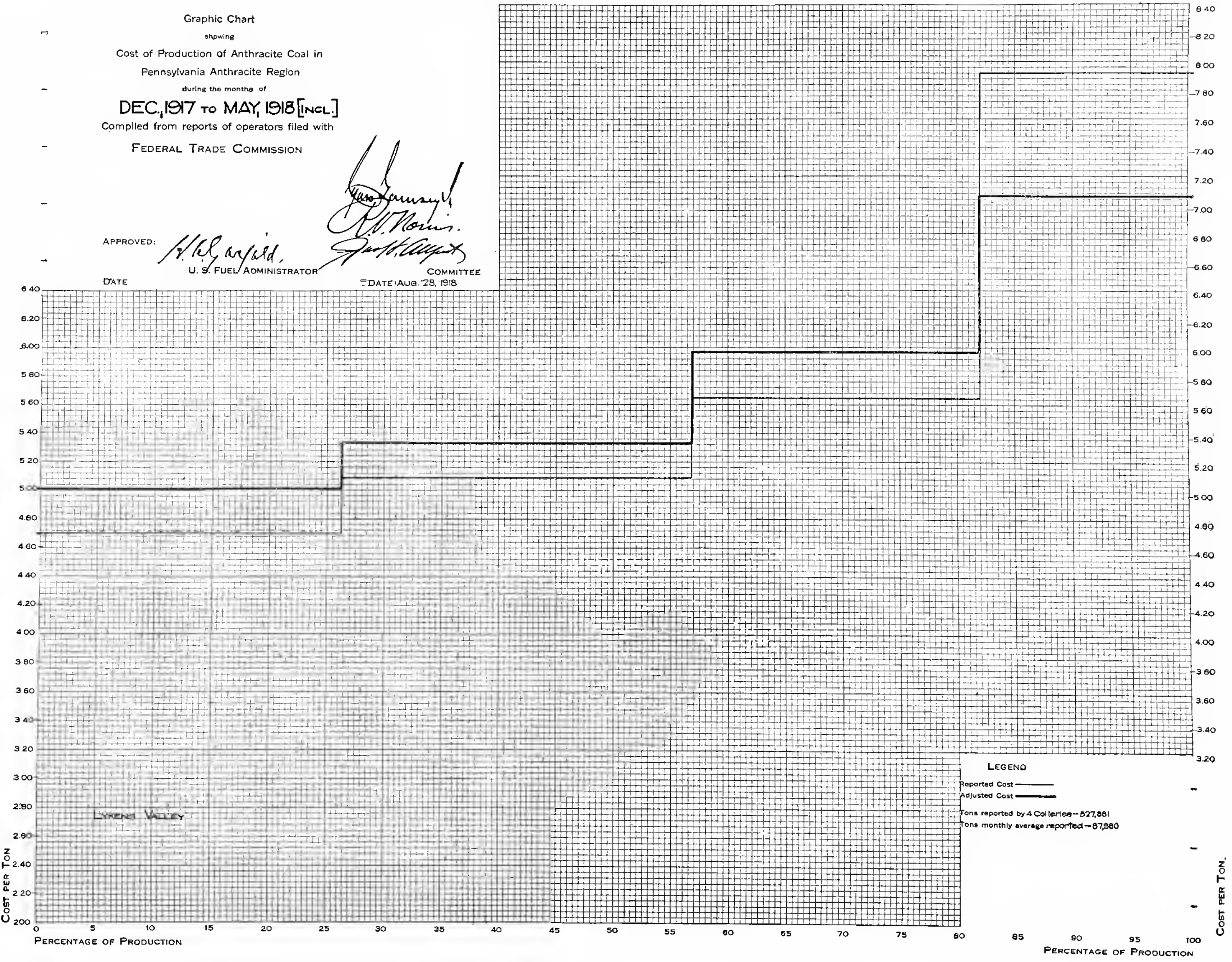
Adjusted Cost ━━━

Tons reported by 27 Collieries – 3,382,773

Tons monthly average reported – 563,796

UNITED STATES FUEL ADMINISTRATION

No. 85



Graphic Chart
showing
Cost of Production of Anthracite Coal in
Pennsylvania Anthracite Region
during the months of
DEC., 1917 to MAY, 1918 [Incl.]
Compiled from reports of operators filed with
Federal Trade Commission

Approved: H. A. Garfield,
U. S. Fuel Administrator
Date

R. V. Norris.
Committee
Date: Aug. 28, 1918

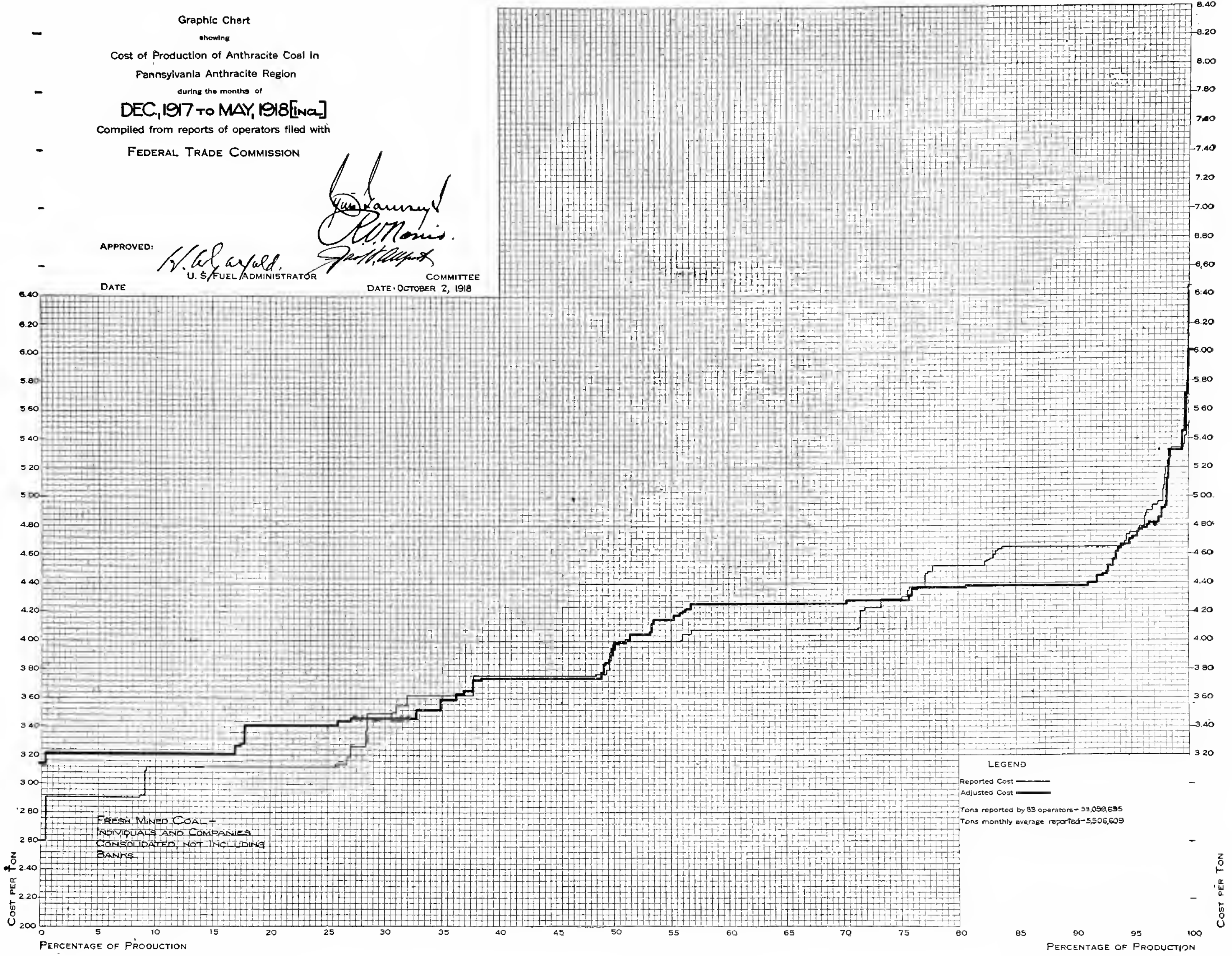
UNITED STATES FUEL ADMINISTRATION

No. 86

Graphic Chart
showing
Cost of Production of Anthracite Coal in
Pennsylvania Anthracite Region
during the months of
DEC, 1917 TO MAY, 1918 [INCL.]
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield
U. S. FUEL ADMINISTRATOR
DATE

R. V. Norris.
COMMITTEE
DATE: OCTOBER 2, 1918



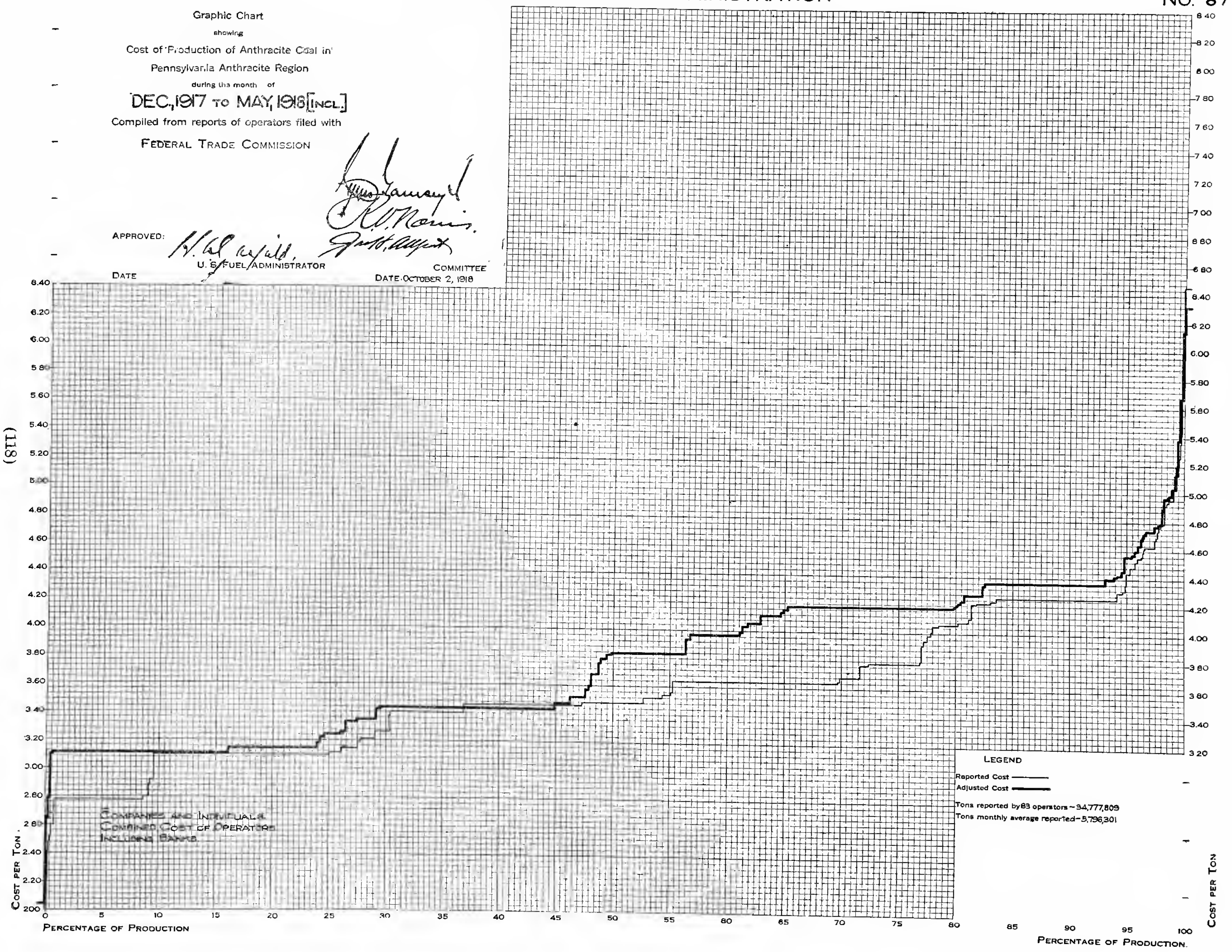
UNITED STATES FUEL ADMINISTRATION

No. 87

Graphic Chart
showing
Cost of Production of Anthracite Coal in
Pennsylvania Anthracite Region
during the month of
DEC., 1917 TO MAY, 1918 [INCL.]
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield,
U. S. FUEL ADMINISTRATOR
DATE

R. V. Norris.
COMMITTEE
DATE: OCTOBER 2, 1918



LEGEND
Reported Cost ——
Adjusted Cost ━━

Tons reported by 83 operators—34,777,809
Tons monthly average reported—5,796,301

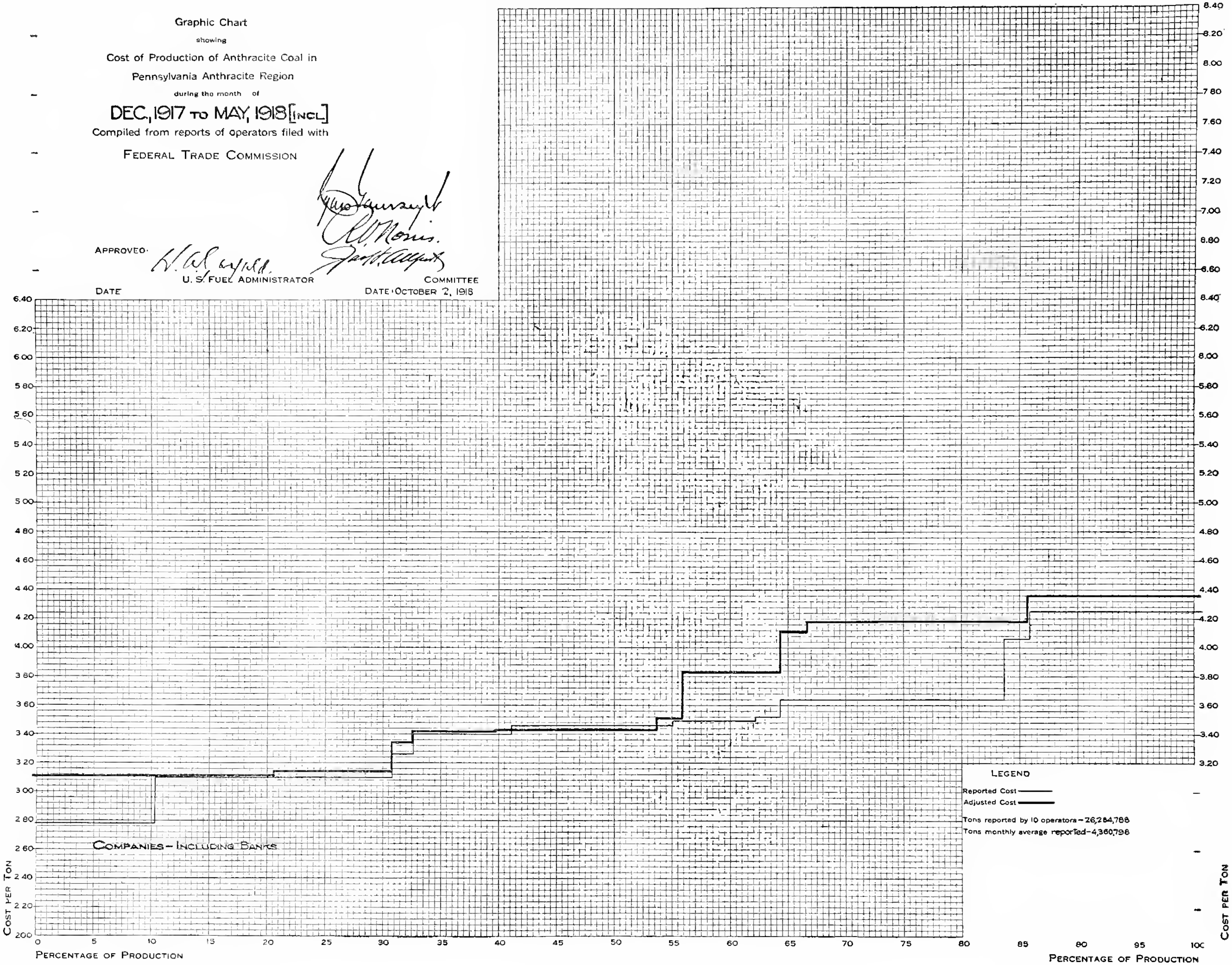
UNITED STATES FUEL ADMINISTRATION

No. 88

Graphic Chart
showing
Cost of Production of Anthracite Coal in
Pennsylvania Anthracite Region
during the month of
DEC, 1917 to MAY, 1918 [INCL]
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE: OCTOBER 2, 1918



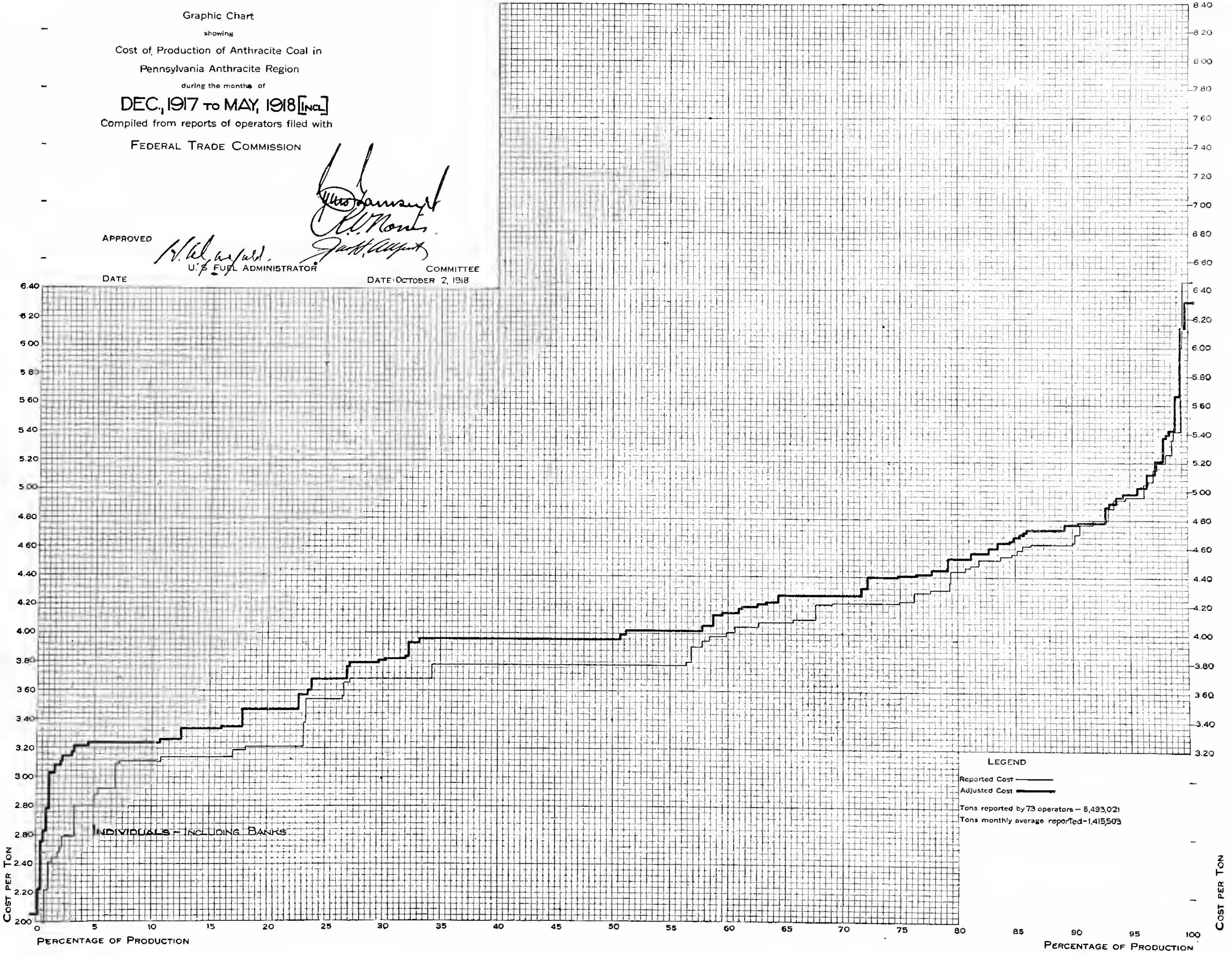
UNITED STATES FUEL ADMINISTRATION

No. 83

Graphic Chart
showing
Cost of Production of Anthracite Coal in
Pennsylvania Anthracite Region
during the months of
DEC., 1917 TO MAY, 1918 [INCL.]
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED H. A. Garfield
U. S. FUEL ADMINISTRATOR
DATE

R. V. Norris
COMMITTEE
DATE: OCTOBER 2, 1918



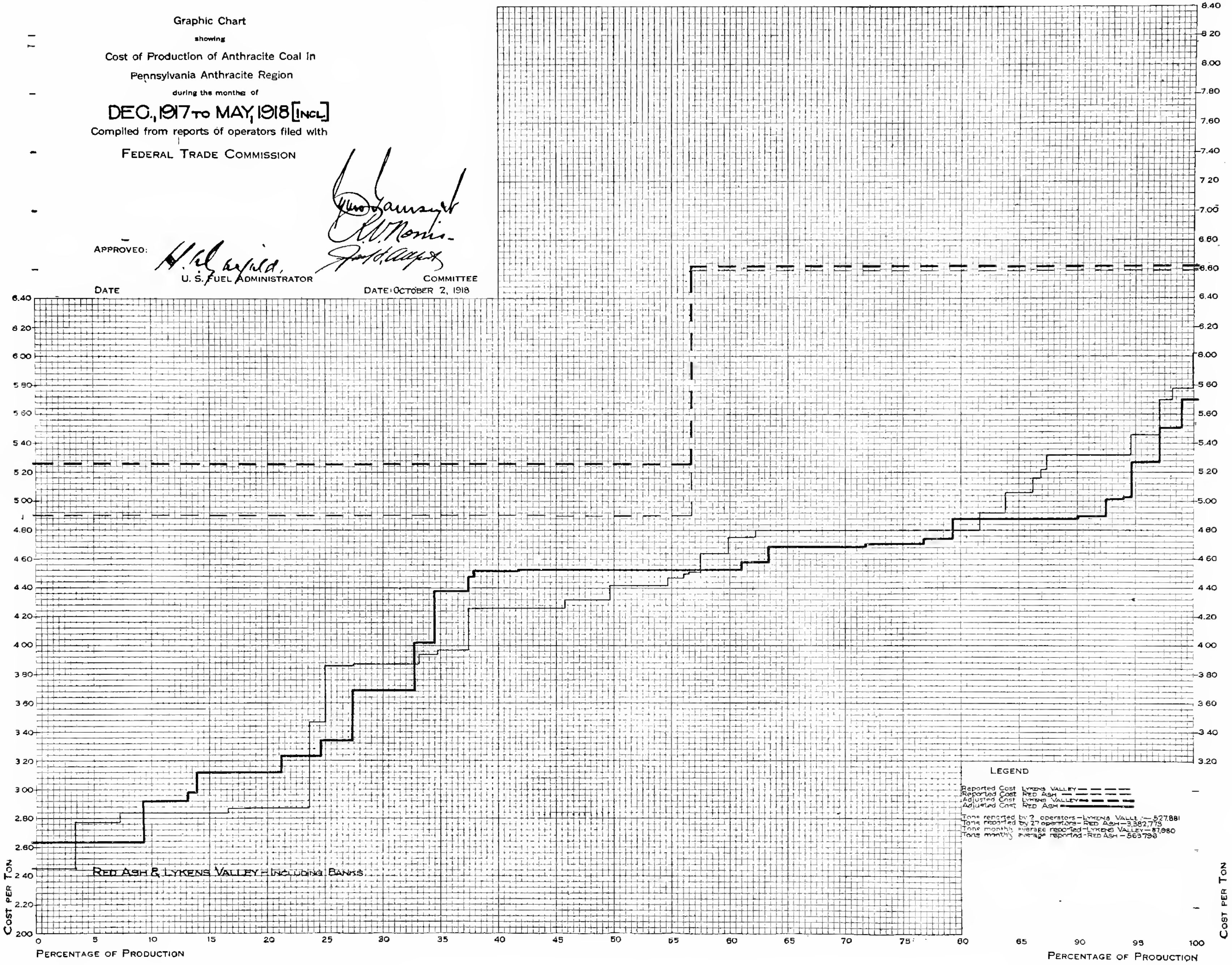
UNITED STATES FUEL ADMINISTRATION

No. 90

Graphic Chart
showing
Cost of Production of Anthracite Coal in
Pennsylvania Anthracite Region
during the months of
DEC., 1917 TO MAY, 1918 [INCL.]
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield
U. S. FUEL ADMINISTRATOR
DATE

R. V. Norris
COMMITTEE
DATE: OCTOBER 2, 1918



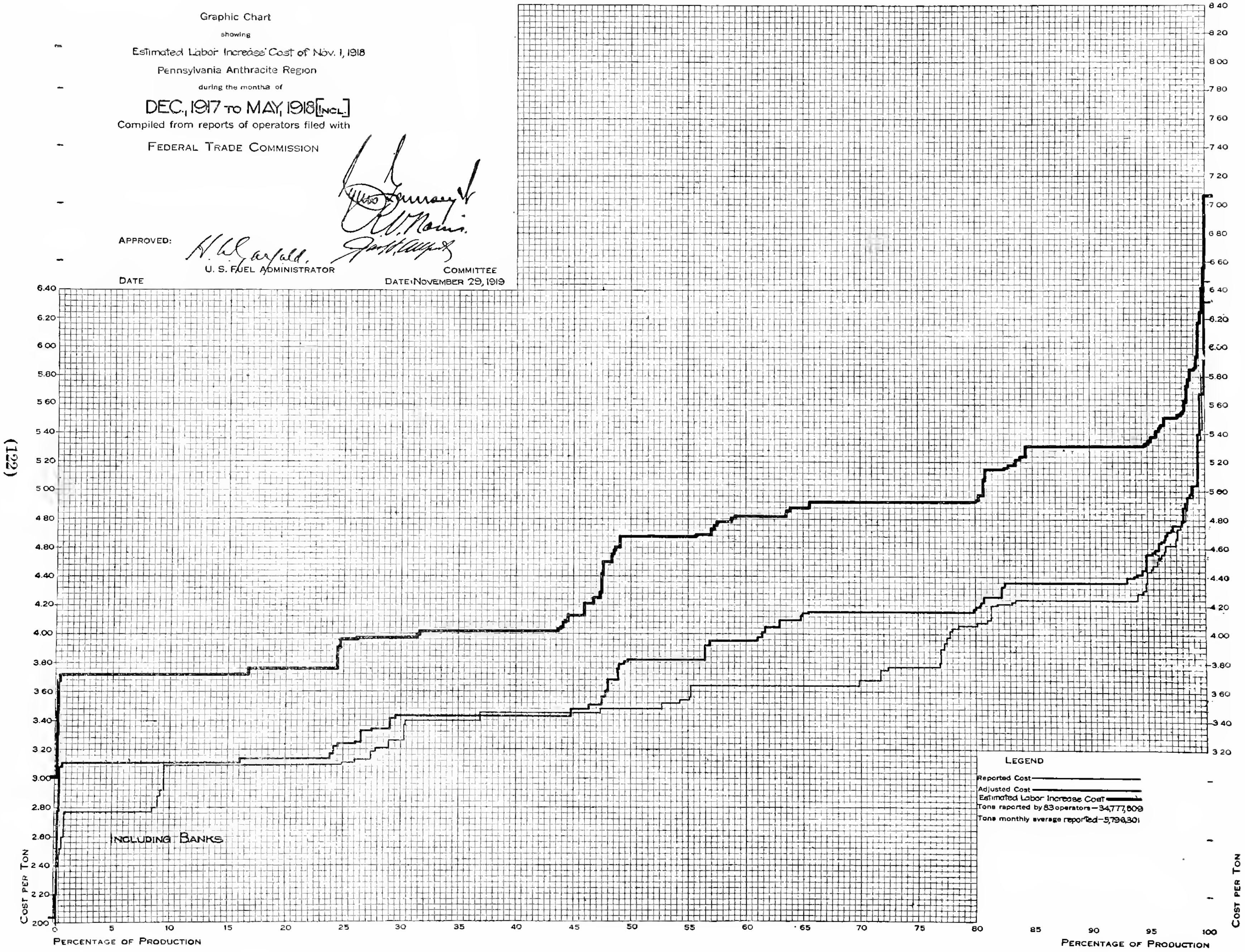
UNITED STATES FUEL ADMINISTRATION

No. 91

Graphic Chart
showing
Estimated Labor Increase Cost of Nov. 1, 1918
Pennsylvania Anthracite Region
during the months of
DEC., 1917 TO MAY, 1918 [INCL.]
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield
U. S. FUEL ADMINISTRATOR
DATE

R. V. Norris
COMMITTEE
DATE: NOVEMBER 29, 1919



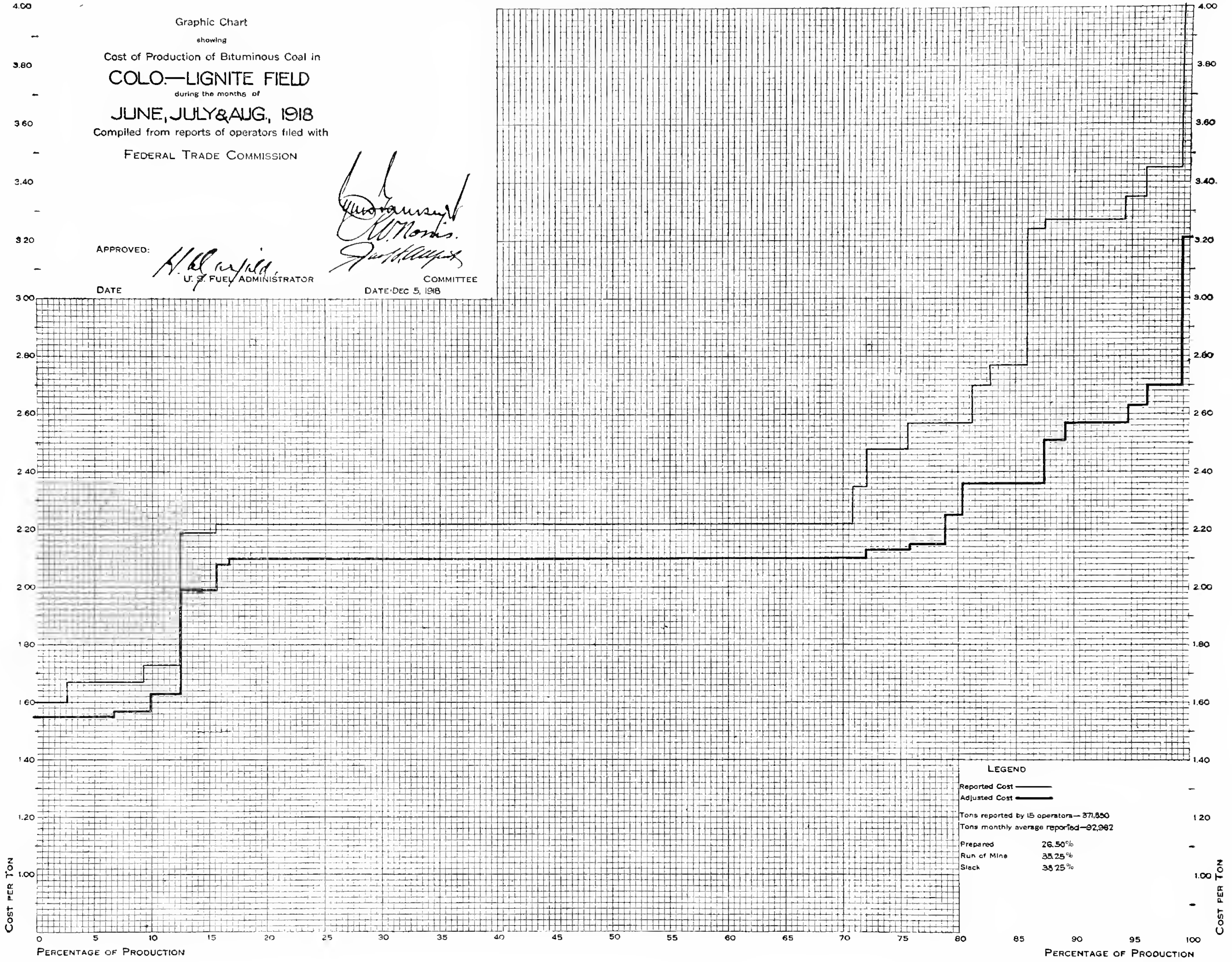
UNITED STATES FUEL ADMINISTRATION

No. 92

Graphic Chart
showing
Cost of Production of Bituminous Coal in
COLO.—LIGNITE FIELD
during the months of
JUNE, JULY & AUG., 1918
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE: DEC 5, 1918



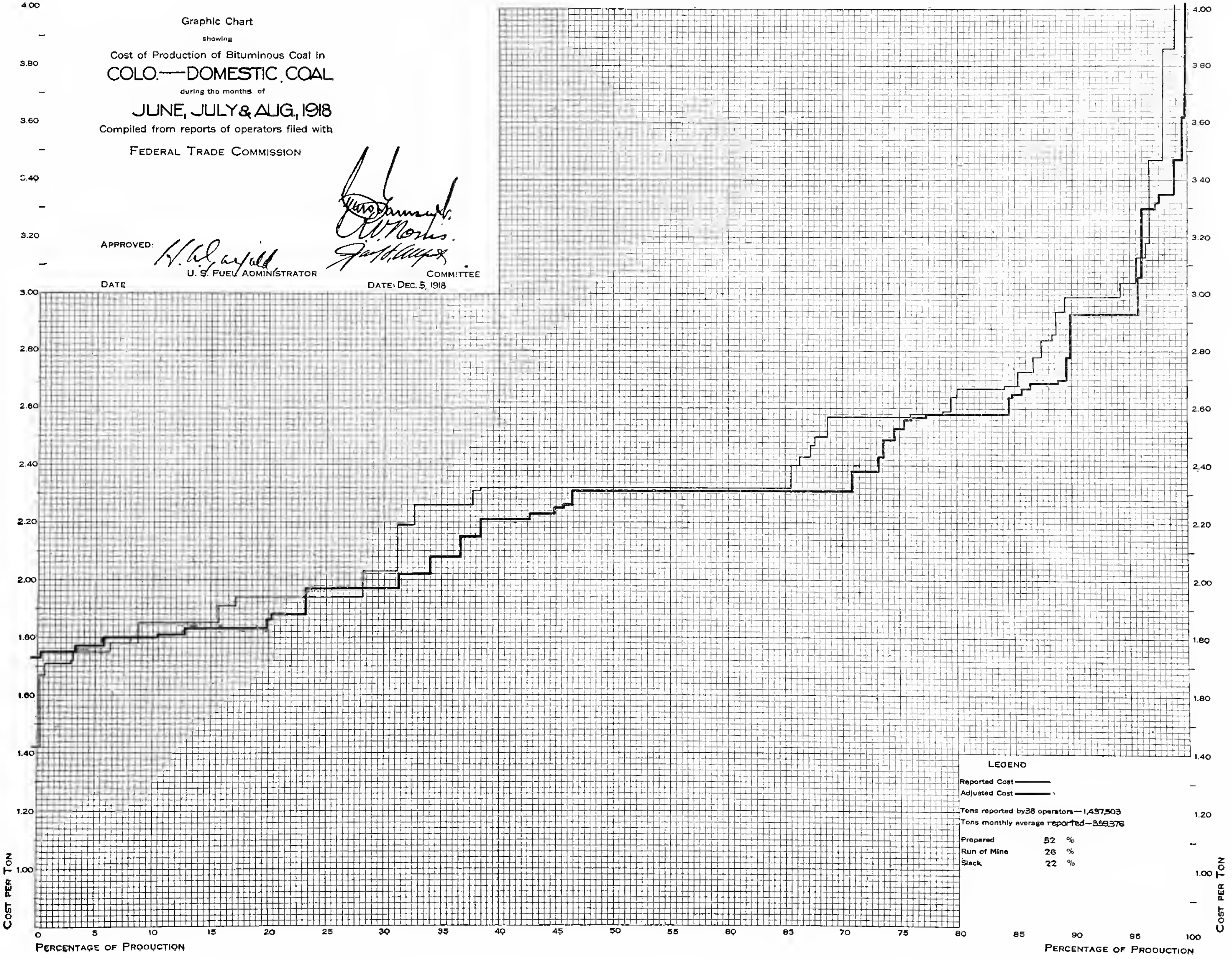
UNITED STATES FUEL ADMINISTRATION

No. 93

Graphic Chart
showing
Cost of Production of Bituminous Coal in
COLO.—DOMESTIC COAL
during the months of
JUNE, JULY & AUG., 1918
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE: DEC. 5, 1918



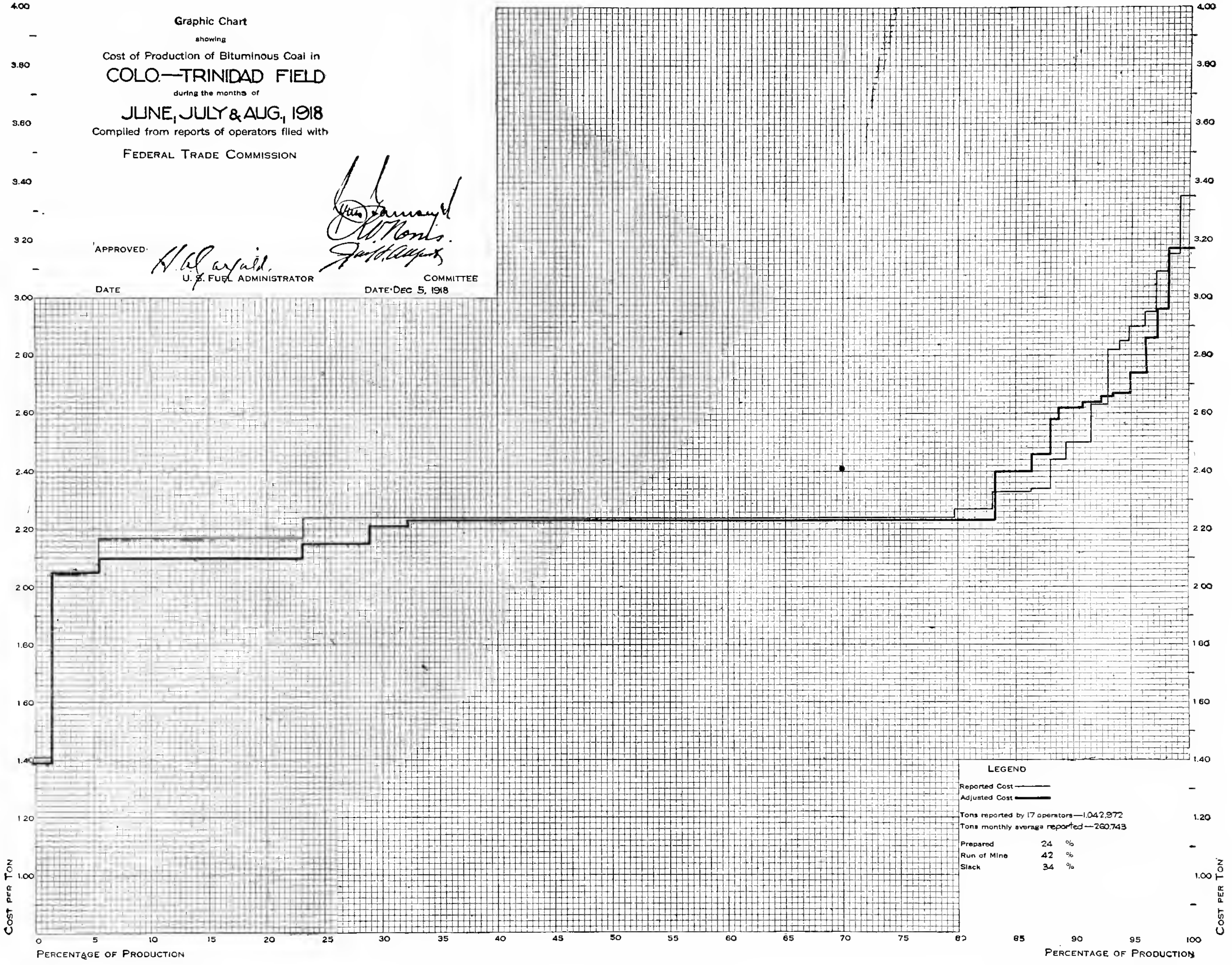
UNITED STATES FUEL ADMINISTRATION

No. 94

Graphic Chart
showing
Cost of Production of Bituminous Coal in
COLO.—TRINIDAD FIELD
during the months of
JUNE, JULY & AUG., 1918
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

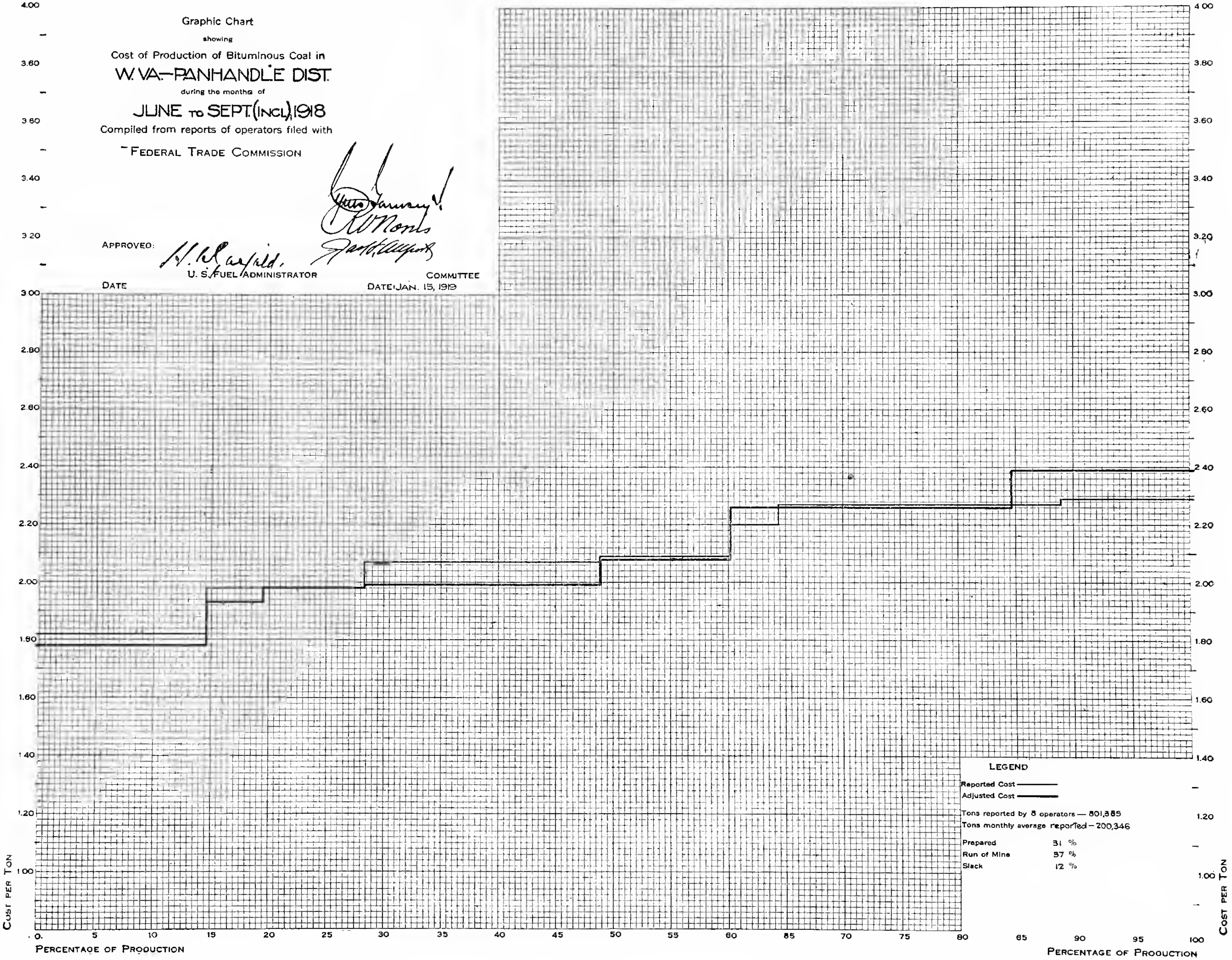
APPROVED H. A. Garfield.
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE DEC 5, 1918



UNITED STATES FUEL ADMINISTRATION

No. 95



Graphic Chart
showing
Cost of Production of Bituminous Coal in
W. VA.-PANHANDLE DIST.
during the months of
JUNE to SEPT. (INCL.) 1918
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield,
U. S. FUEL ADMINISTRATOR
DATE

R. V. Norris
COMMITTEE
DATE: JAN. 15, 1919

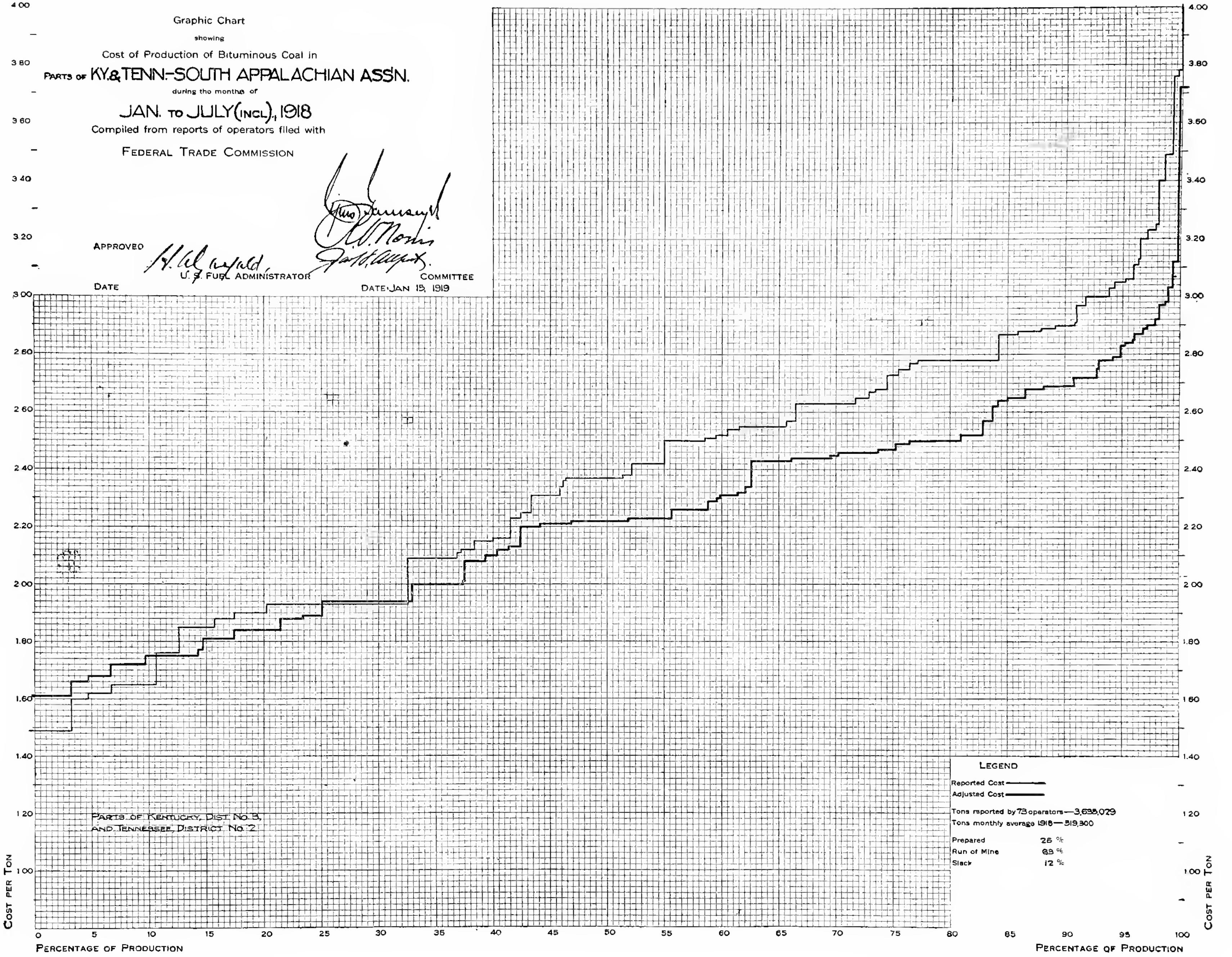
LEGEND
- Reported Cost ——
- Adjusted Cost ——

Tons reported by 8 operators — 801,385
Tons monthly average reported — 200,346

Prepared	31 %
Run of Mine	57 %
Slack	12 %

UNITED STATES FUEL ADMINISTRATION

No. 96



Graphic Chart
showing
Cost of Production of Bituminous Coal in
Parts of KY. & TENN.-SOUTH APPALACHIAN ASS'N.
during the months of
JAN. to JULY (incl.), 1918
Compiled from reports of operators filed with
Federal Trade Commission

Approved H. A. Garfield
U. S. Fuel Administrator
Date

Committee
Date: Jan 15, 1919

Parts of Kentucky, Dist. No. 3,
and Tennessee, District No. 2

Legend
Reported Cost ——
Adjusted Cost ━━
Tons reported by 73 operators—3,638,029
Tons monthly average 1918—519,300

Prepared	26 %
Run of Mine	62 %
Slack	12 %

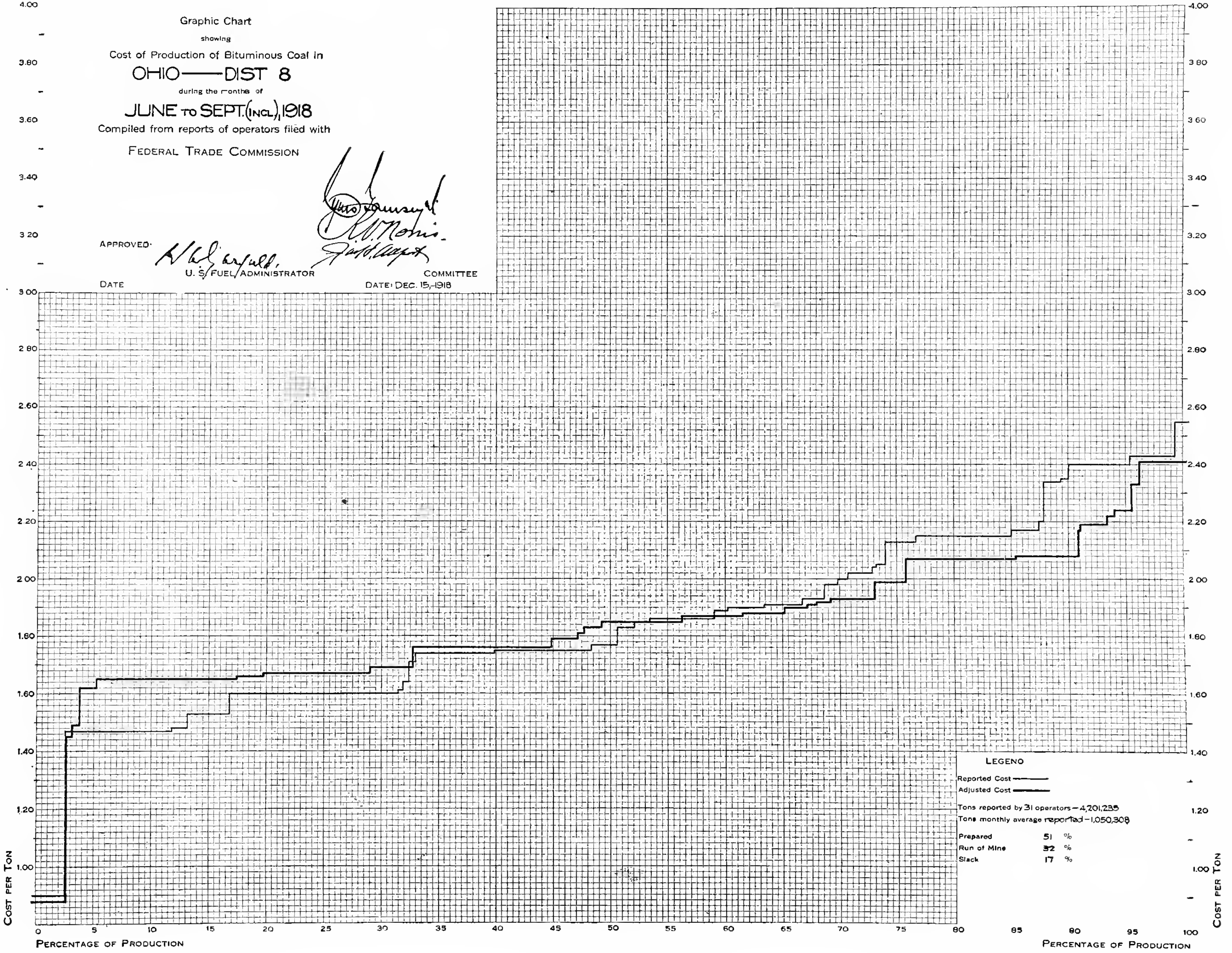
UNITED STATES FUEL ADMINISTRATION

No. 97

Graphic Chart
showing
Cost of Production of Bituminous Coal in
OHIO——DIST 8
during the months of
JUNE TO SEPT. (INCL.), 1918
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE: DEC. 15, 1918



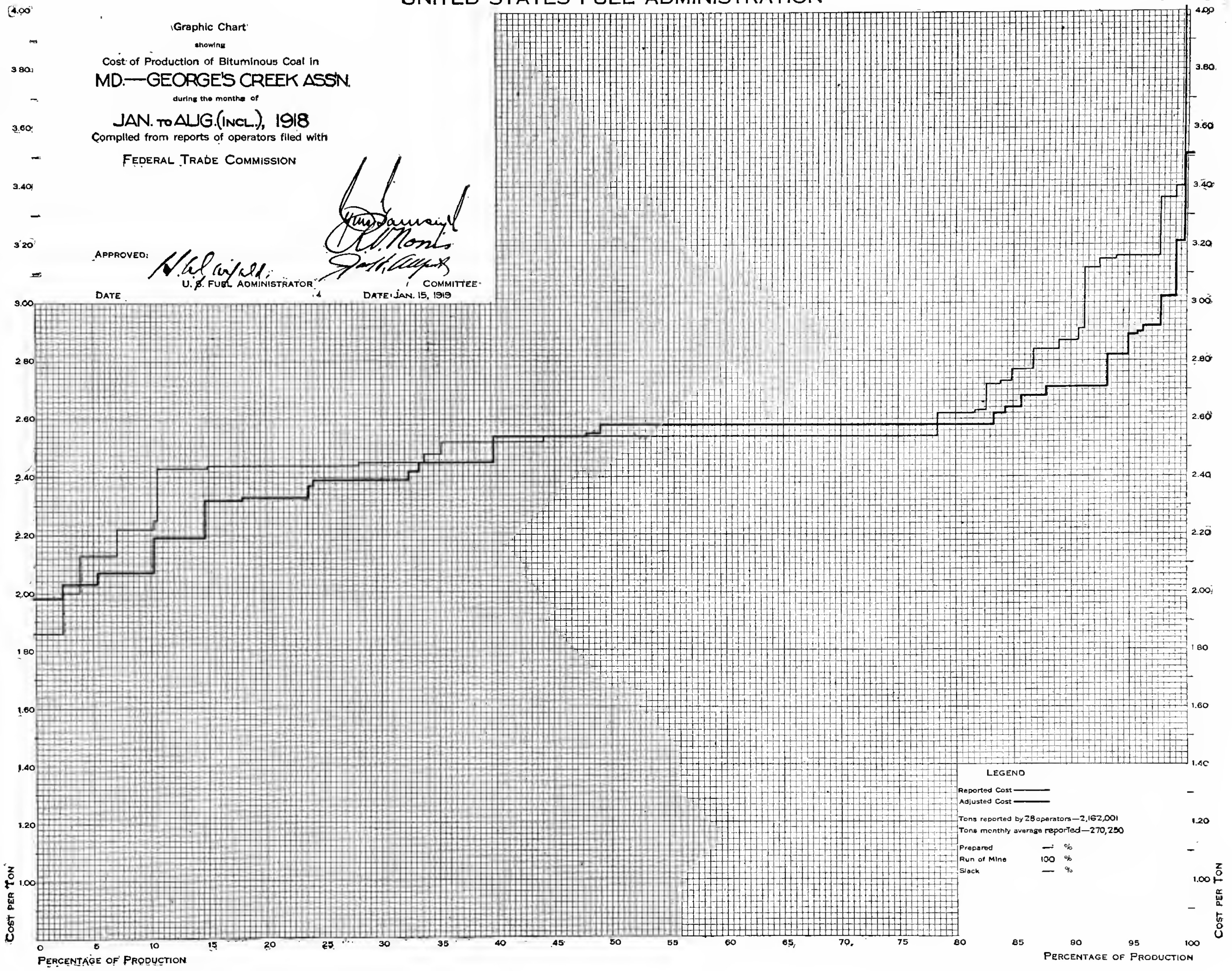
UNITED STATES FUEL ADMINISTRATION

No. 98

Graphic Chart
showing
Cost of Production of Bituminous Coal in
MD.—GEORGE'S CREEK ASS'N.
during the months of
JAN. TO AUG. (INCL.), 1918
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield
U. S. FUEL ADMINISTRATOR
DATE

R. V. Norris
Jas. H. Allport
COMMITTEE
DATE: JAN. 15, 1919



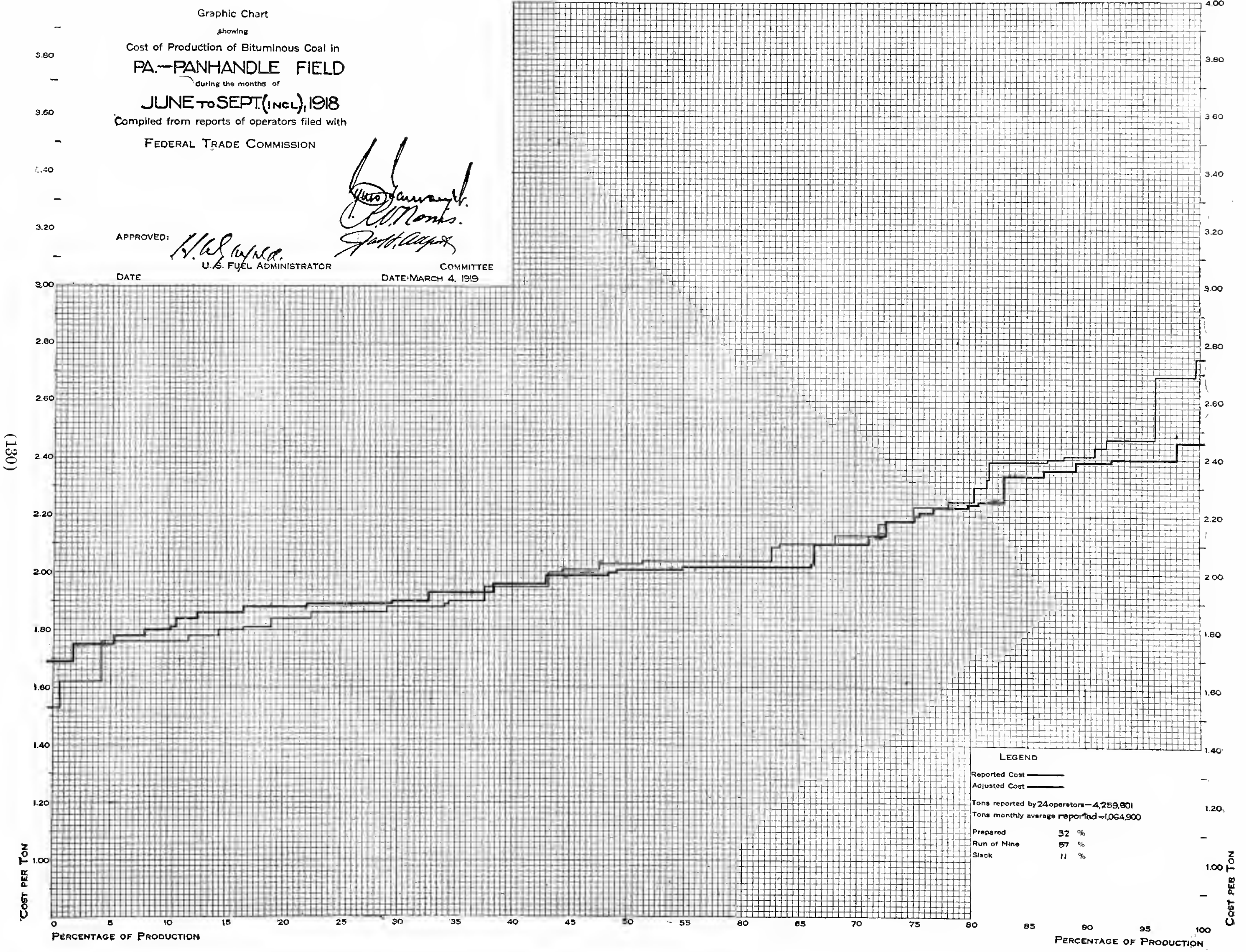
UNITED STATES FUEL ADMINISTRATION

No. 99

Graphic Chart
showing
Cost of Production of Bituminous Coal in
PA.—PANHANDLE FIELD
during the months of
JUNE TO SEPT. (INCL.), 1918
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

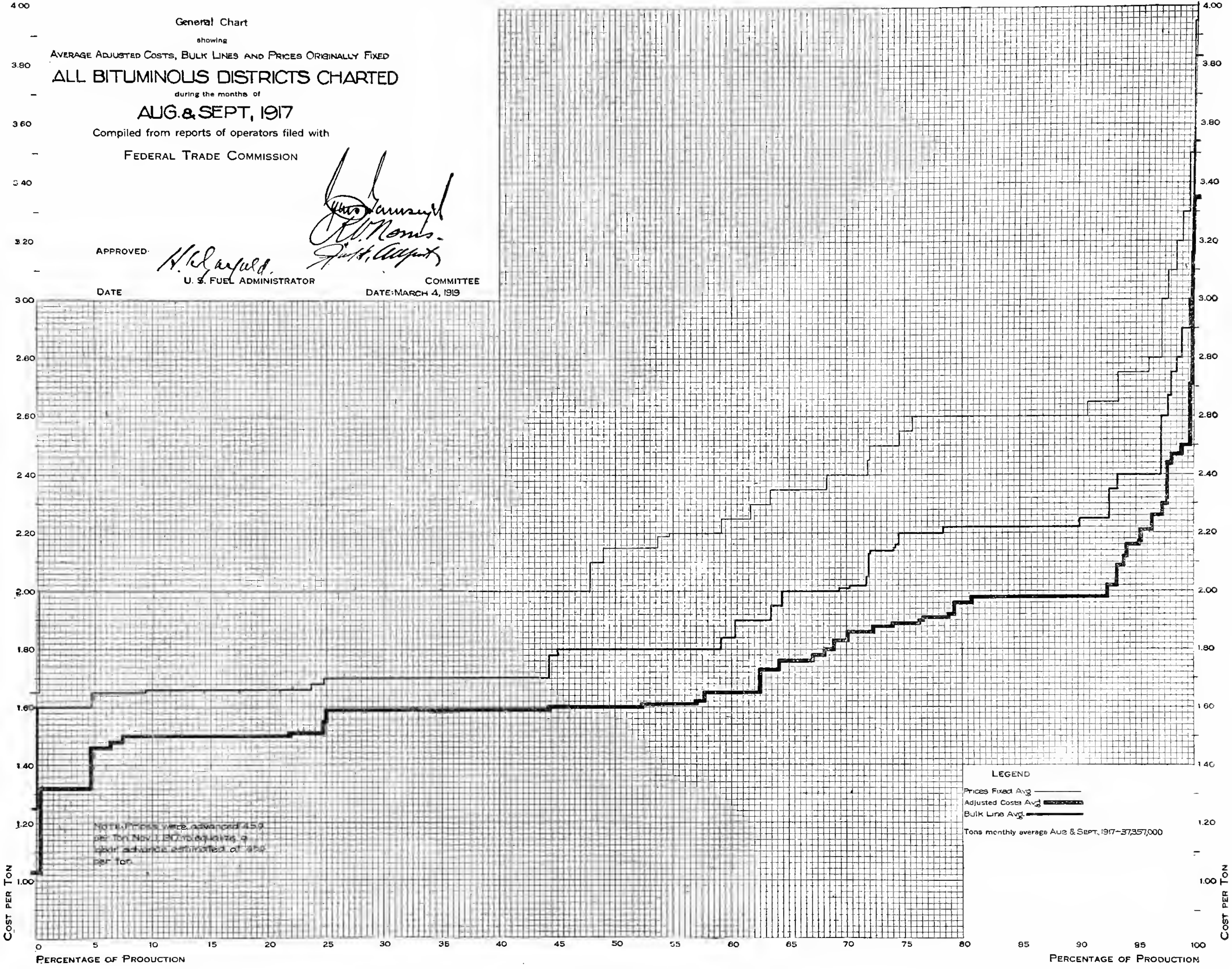
APPROVED:
U.S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE: MARCH 4, 1919



UNITED STATES FUEL ADMINISTRATION

No. 100



General Chart
showing
Average Adjusted Costs, Bulk Lines and Prices Originally Fixed
ALL BITUMINOUS DISTRICTS CHARTED
during the months of
AUG. & SEPT., 1917
Compiled from reports of operators filed with
Federal Trade Commission

Approved: H. A. Garfield.
U. S. Fuel Administrator
Date

R. V. Norris.
Committee
Date: March 4, 1919

Note:—Prices were advanced 45¢ per Ton Nov. 1, 1917, to adjust for a labor advance estimated at 45¢ per ton.

UNITED STATES FUEL ADMINISTRATION

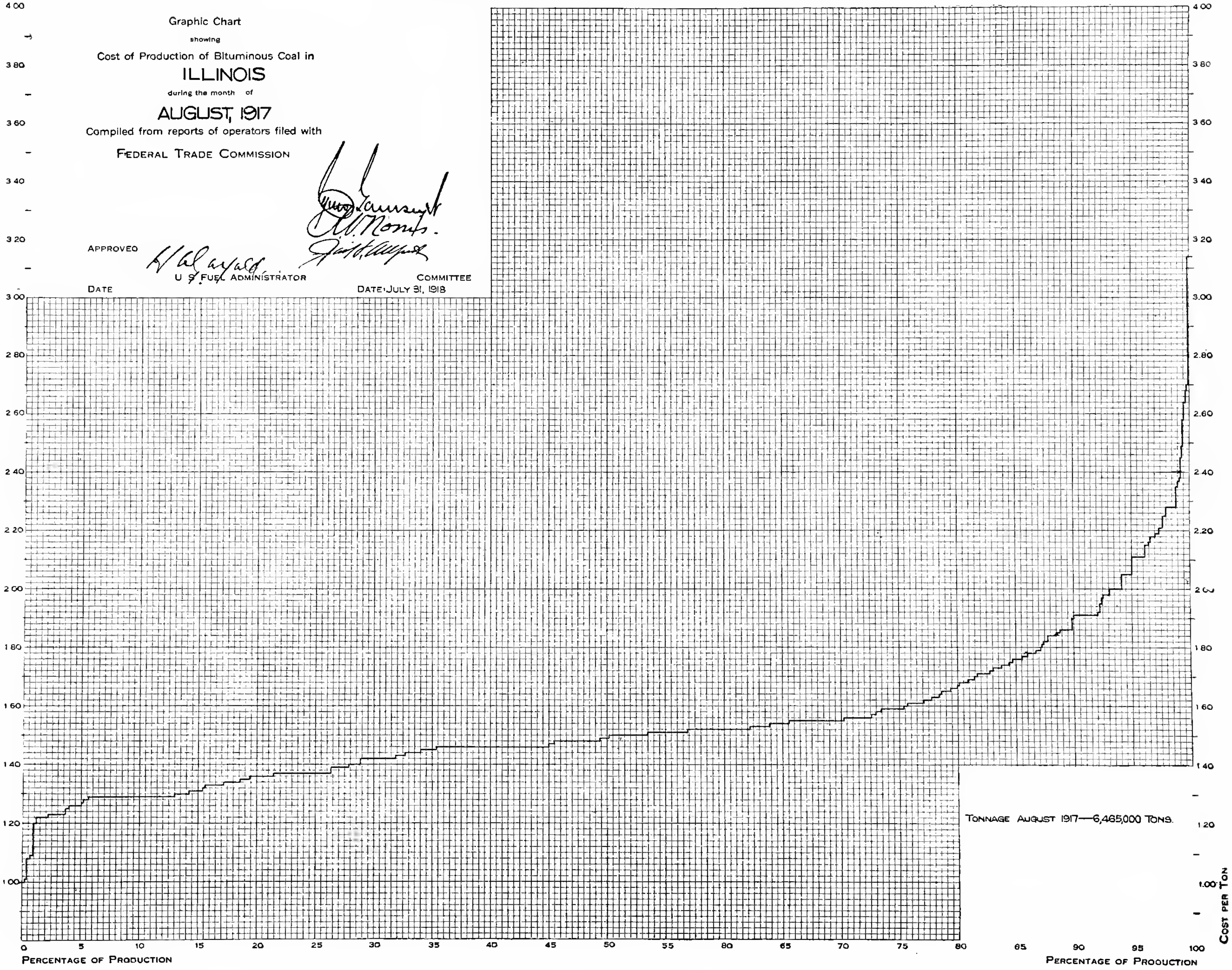
No. 101

Graphic Chart
showing
Cost of Production of Bituminous Coal in
ILLINOIS
during the month of
AUGUST, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED
DATE

H A Garfield
U S FUEL ADMINISTRATOR

COMMITTEE
DATE: JULY 31, 1918



TONNAGE AUGUST 1917—6,465,000 TONS.

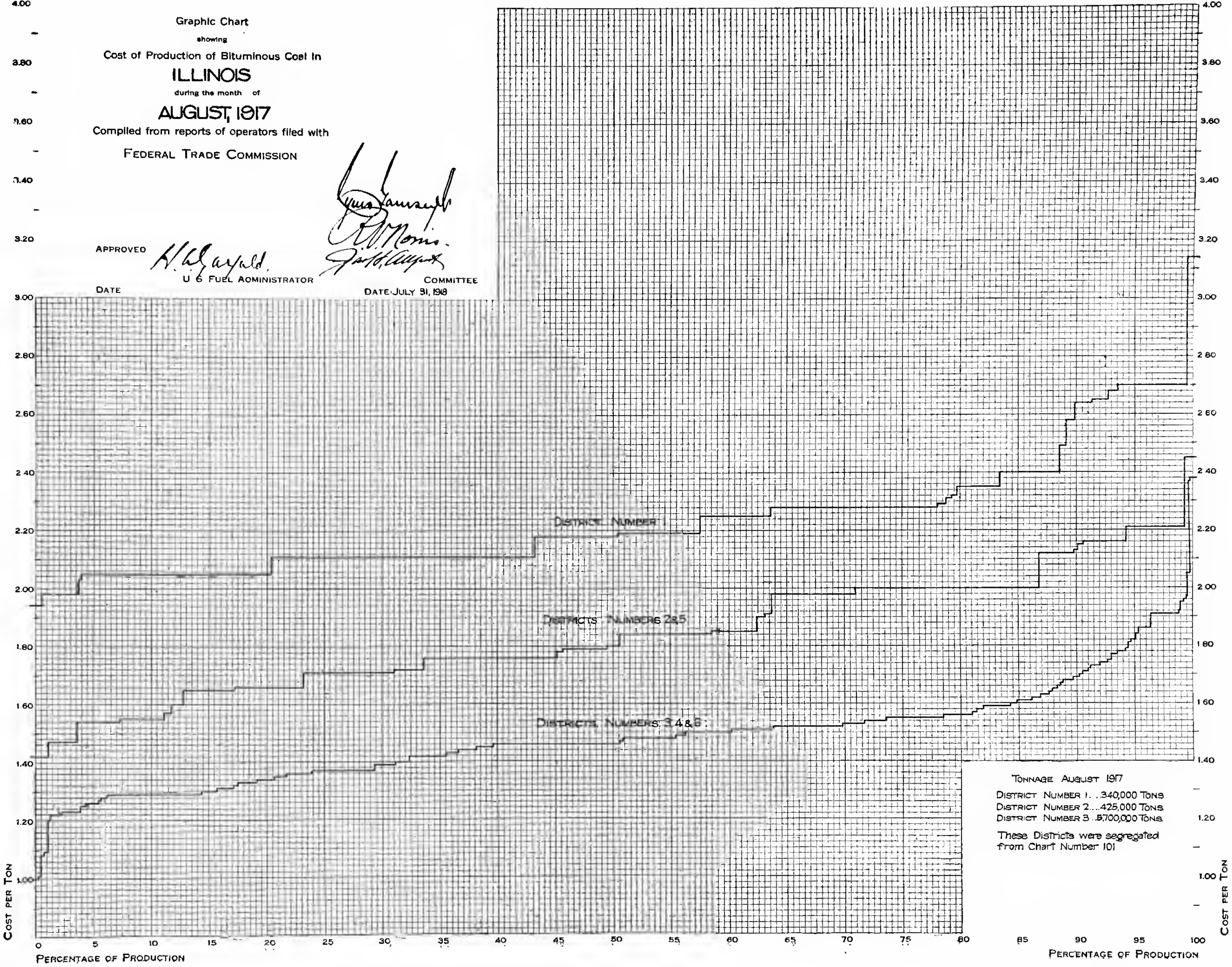
UNITED STATES FUEL ADMINISTRATION

No. 102

Graphic Chart
showing
Cost of Production of Bituminous Coal in
ILLINOIS
during the month of
AUGUST, 1917
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED H. A. Garfield.
U S FUEL ADMINISTRATOR
DATE

R. V. Norris.
COMMITTEE
DATE JULY 31, 1918



TONNAGE AUGUST 1917
DISTRICT NUMBER 1 . . 340,000 TONS
DISTRICT NUMBER 2 . . . 425,000 TONS
DISTRICT NUMBER 3 . . 5,700,000 TONS

These Districts were segregated from Chart Number 101

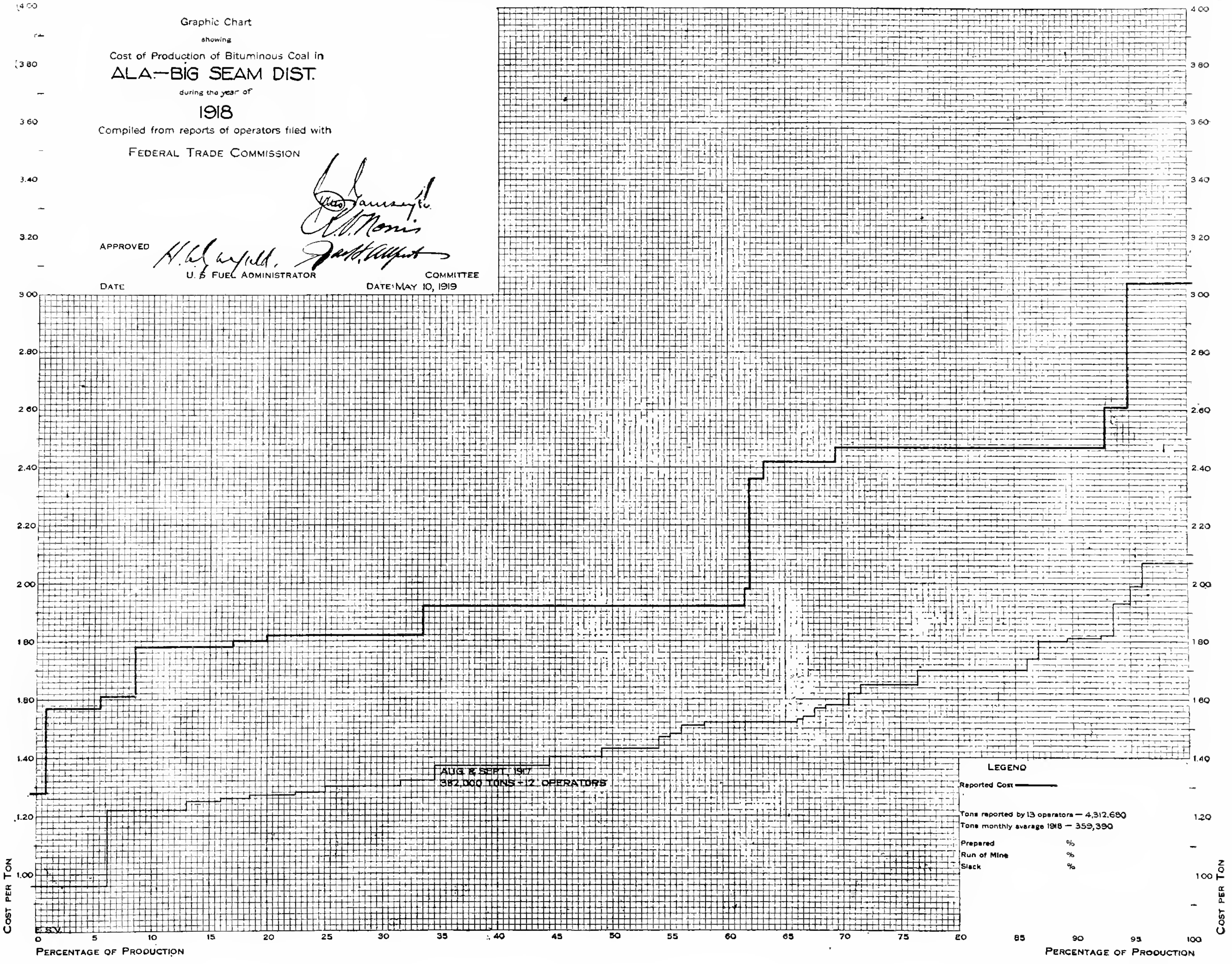
UNITED STATES FUEL ADMINISTRATION

No. 103

Graphic Chart
showing
Cost of Production of Bituminous Coal in
ALA.—BIG SEAM DIST.
during the year of
1918
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED H. A. Garfield
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE: MAY 10, 1919



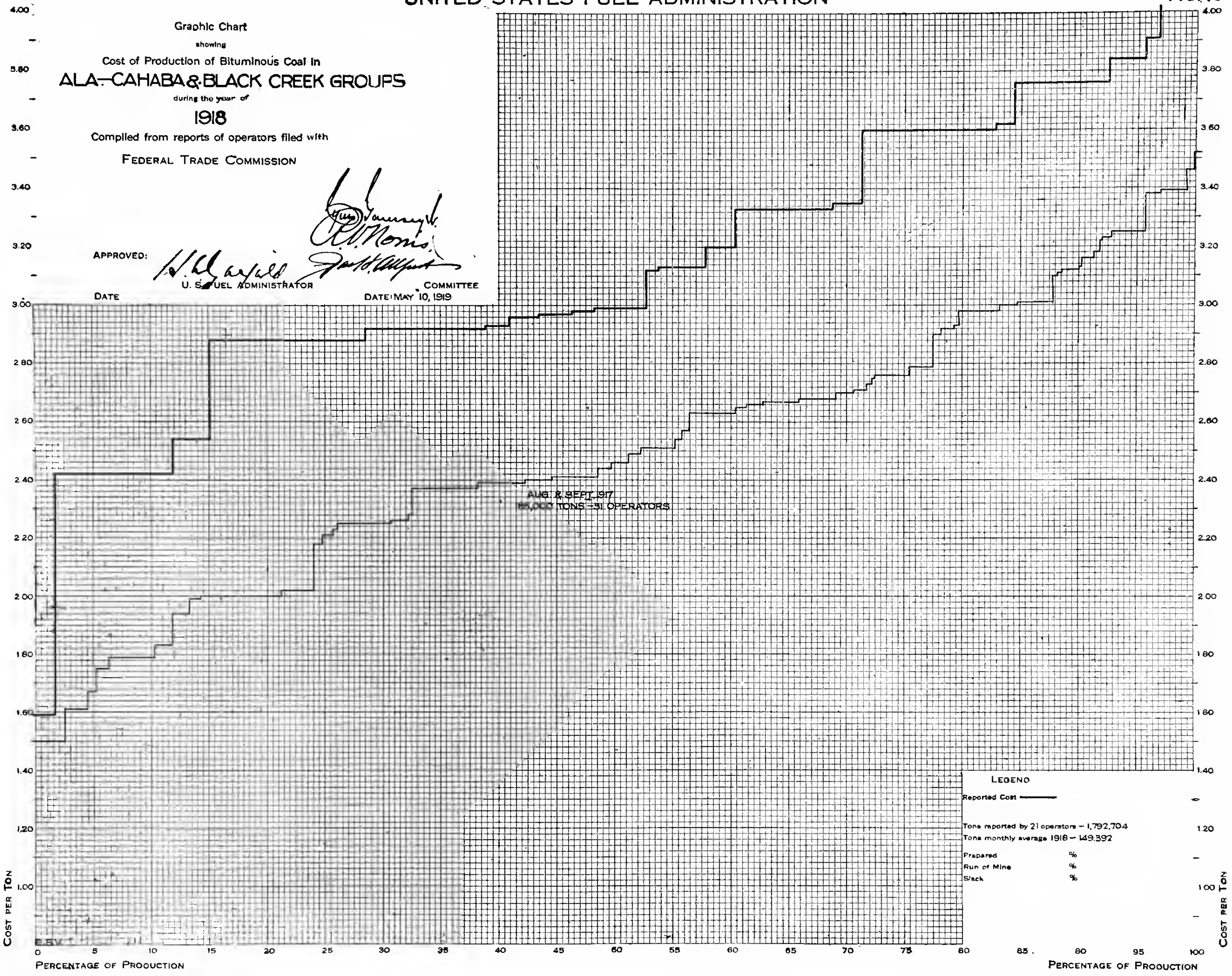
UNITED STATES FUEL ADMINISTRATION

No. 104

Graphic Chart
showing
Cost of Production of Bituminous Coal in
ALA.-CAHABA & BLACK CREEK GROUPS
during the year of
1918
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield
U. S. FUEL ADMINISTRATOR
DATE

R. V. Norris
COMMITTEE
DATE: MAY 10, 1919



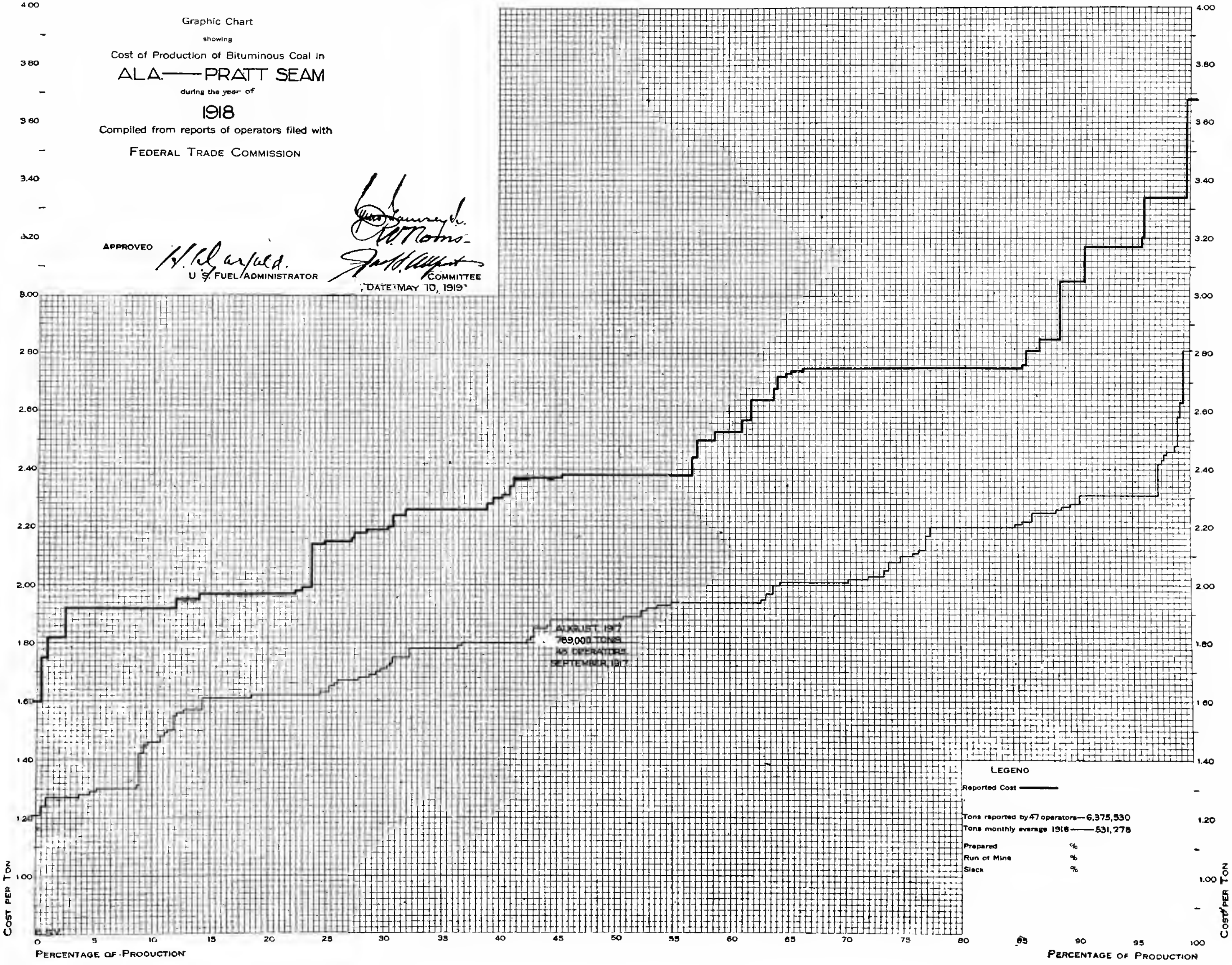
UNITED STATES FUEL ADMINISTRATION

No. 105

Graphic Chart
showing
Cost of Production of Bituminous Coal in
ALA.——PRATT SEAM
during the year of
1918
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED H. A. Garfield.
U. S. FUEL ADMINISTRATOR

COMMITTEE
DATE MAY 10, 1919



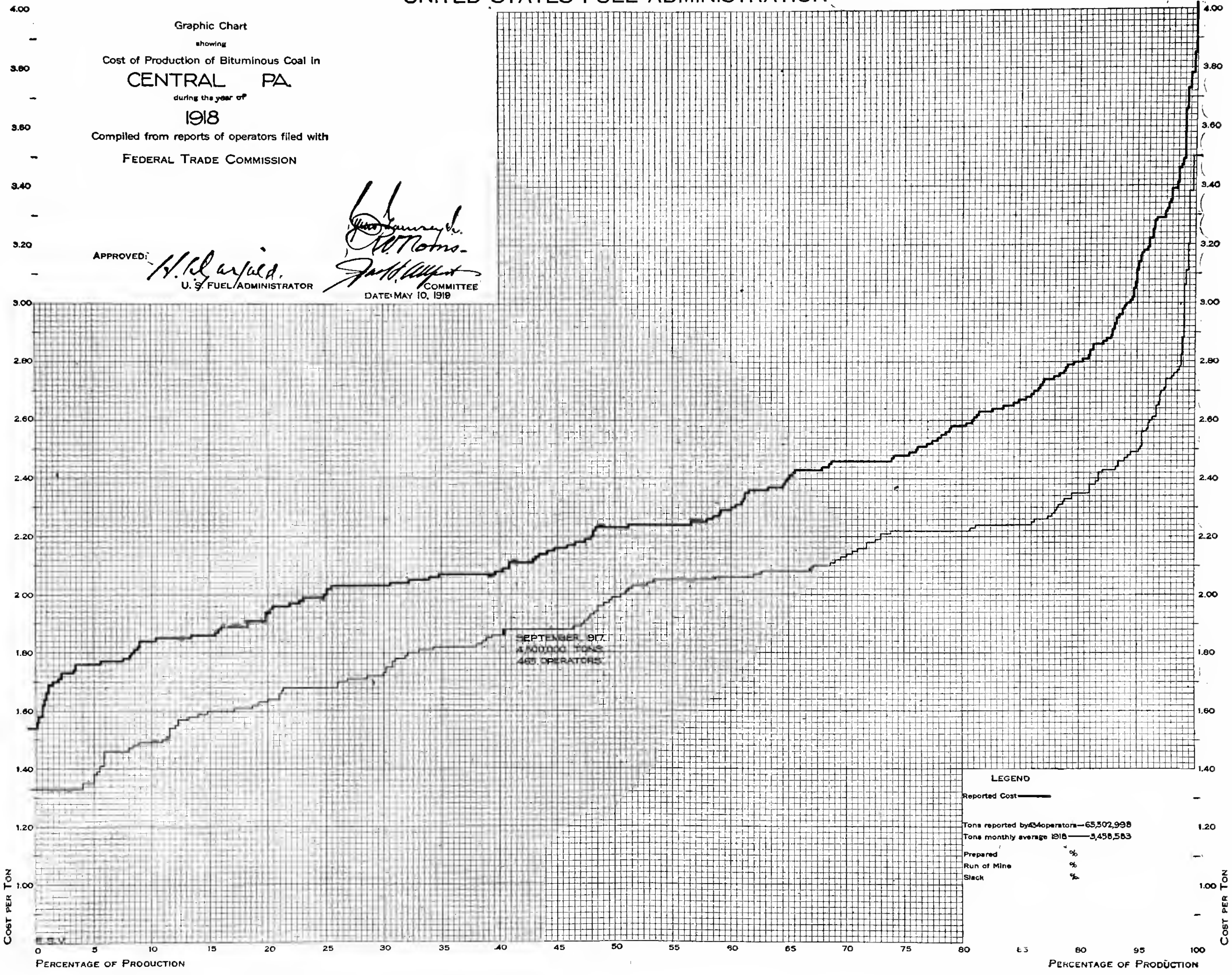
UNITED STATES FUEL ADMINISTRATION

No. 106

Graphic Chart
showing
Cost of Production of Bituminous Coal in
CENTRAL PA.
during the year of
1918
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR

COMMITTEE
DATE: MAY 10, 1919



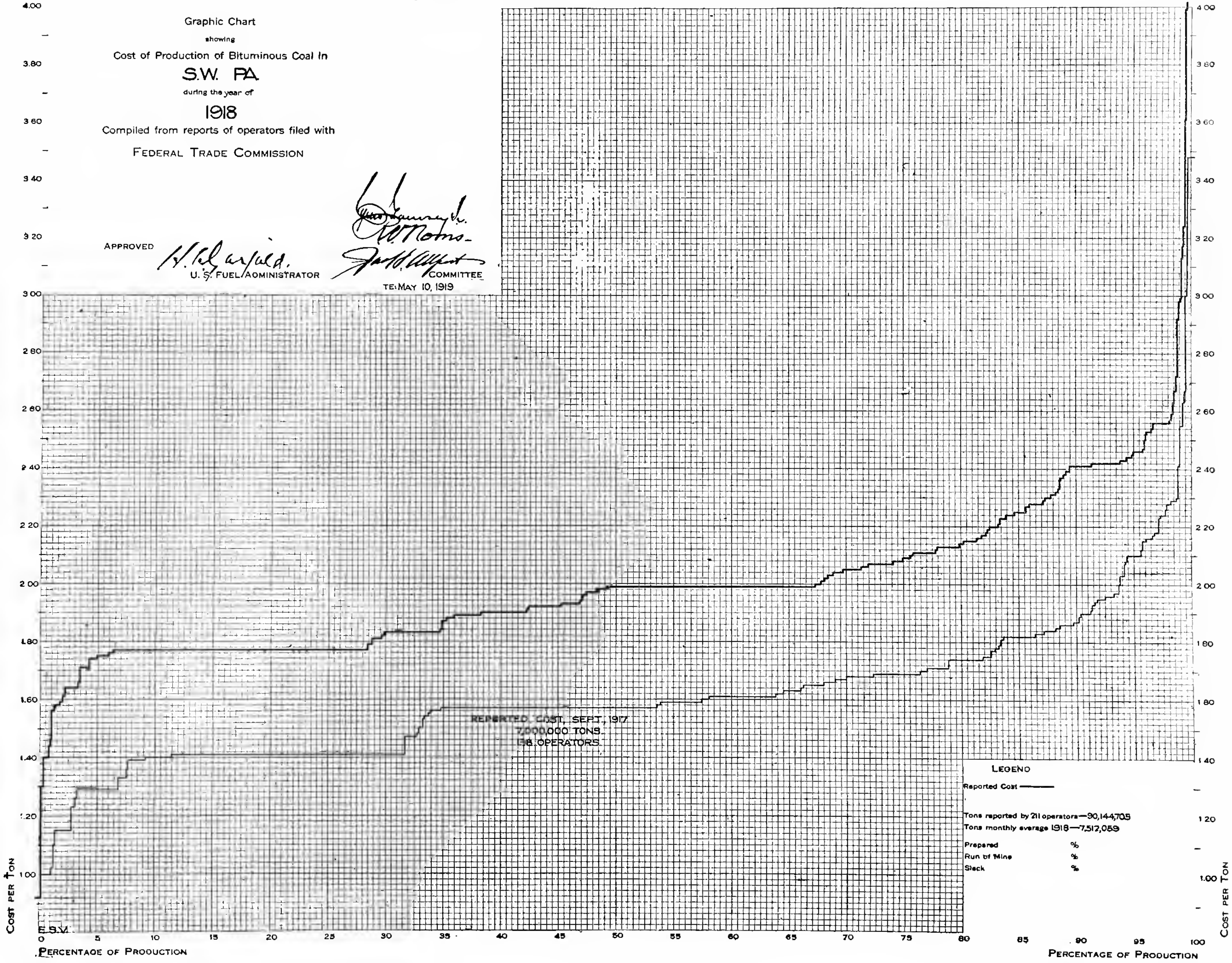
UNITED STATES FUEL ADMINISTRATION

No. 107

Graphic Chart
showing
Cost of Production of Bituminous Coal In
S.W. PA
during the year of
1918
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED H. A. Garfield.
U. S. FUEL ADMINISTRATOR

COMMITTEE
TE: MAY 10, 1919



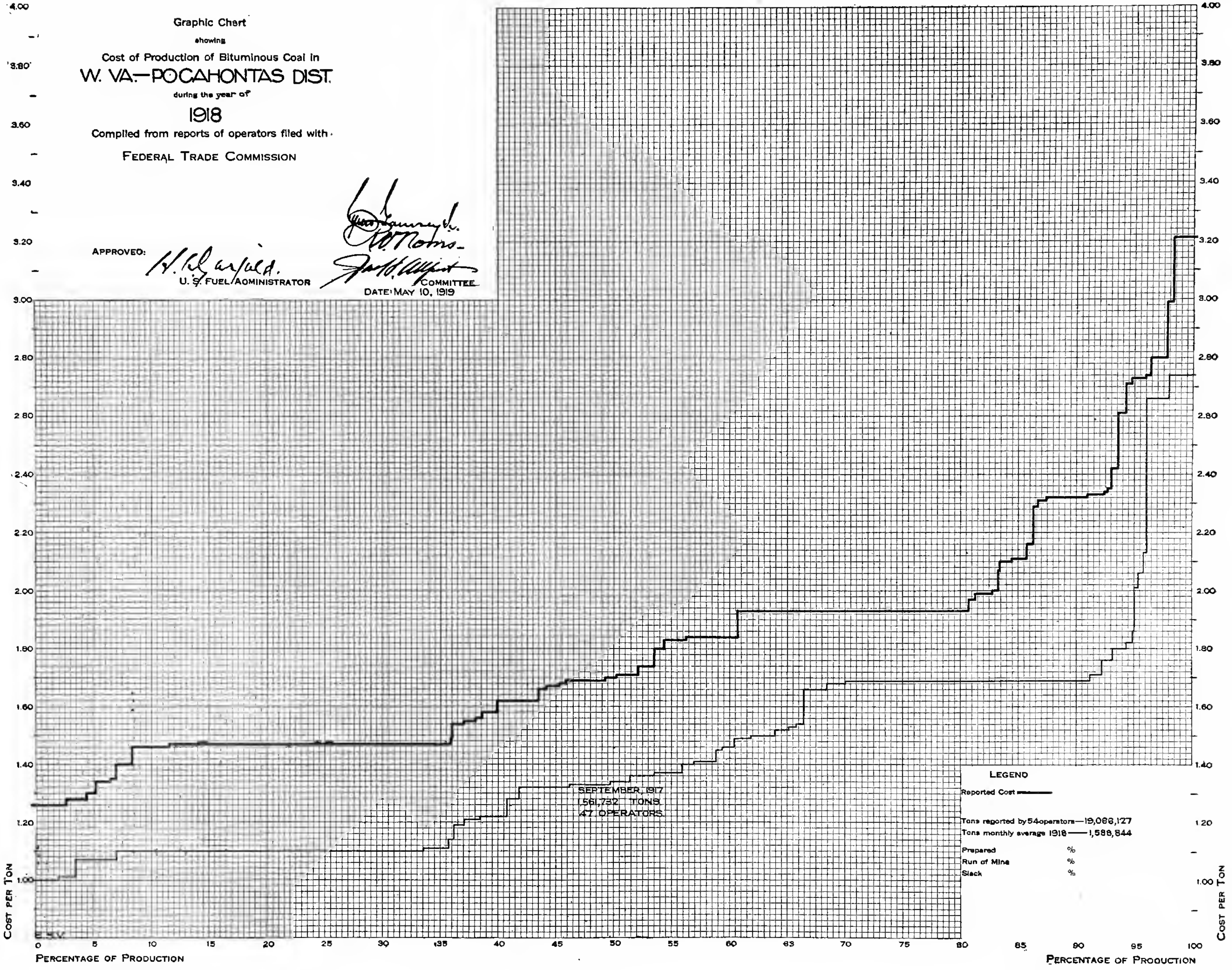
UNITED STATES FUEL ADMINISTRATION

No. 108

Graphic Chart
showing
Cost of Production of Bituminous Coal in
W. VA.—POCAHONTAS DIST.
during the year of
1918
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR

COMMITTEE
DATE: MAY 10, 1919



LEGEND

Reported Cost ——

Tons reported by 54 operators—19,086,127
Tons monthly average 1918——1,588,844

Prepared %
Run of Mine %
Slack %

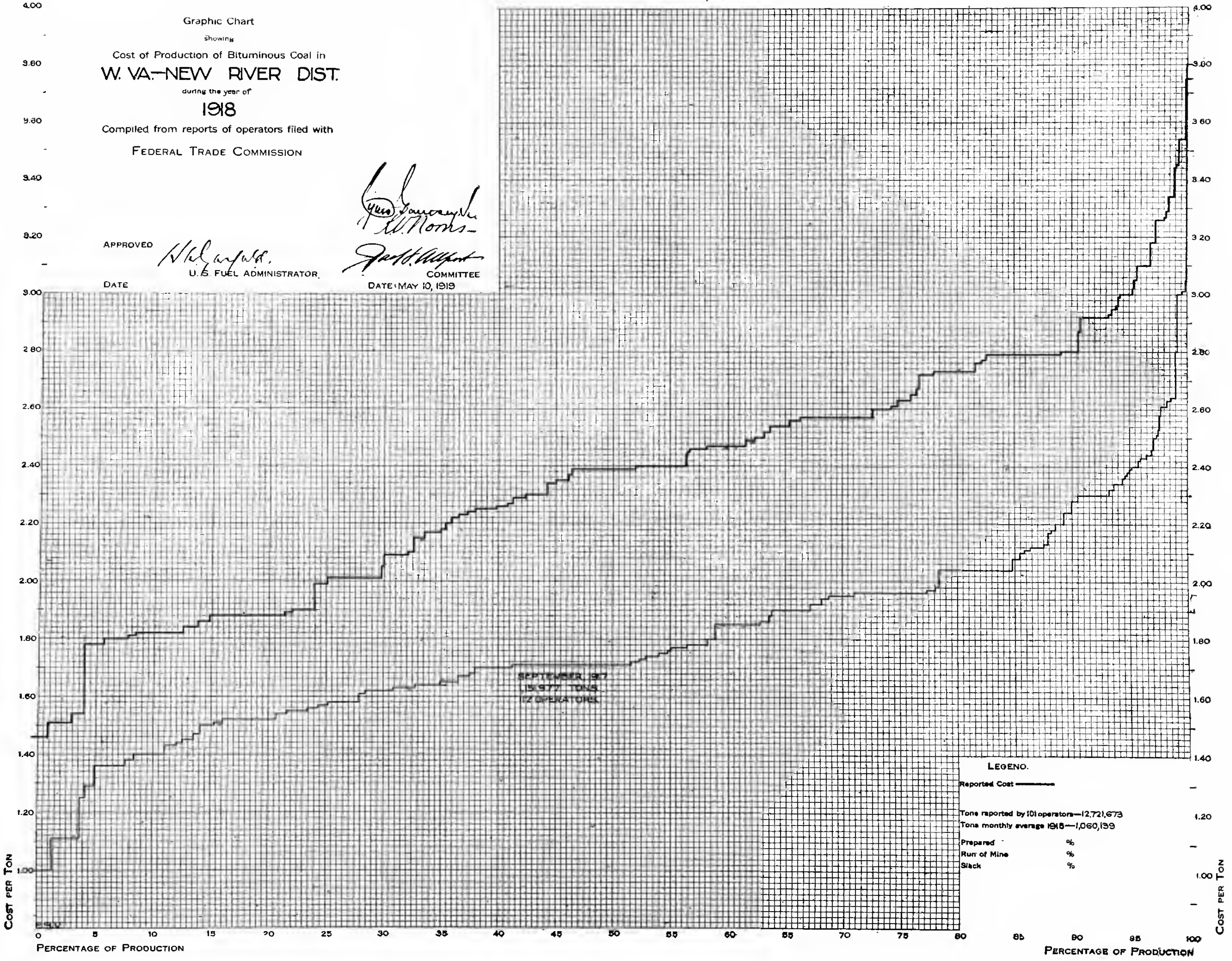
UNITED STATES FUEL ADMINISTRATION

No. 109

Graphic Chart
showing
Cost of Production of Bituminous Coal in
W. VA.—NEW RIVER DIST.
during the year of
1918
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED H. A. Garfield.
U. S. FUEL ADMINISTRATOR.
DATE

Cyrus Garnsey Jr.
W. Morris
Jas. H. Allport
COMMITTEE
DATE: MAY 10, 1919



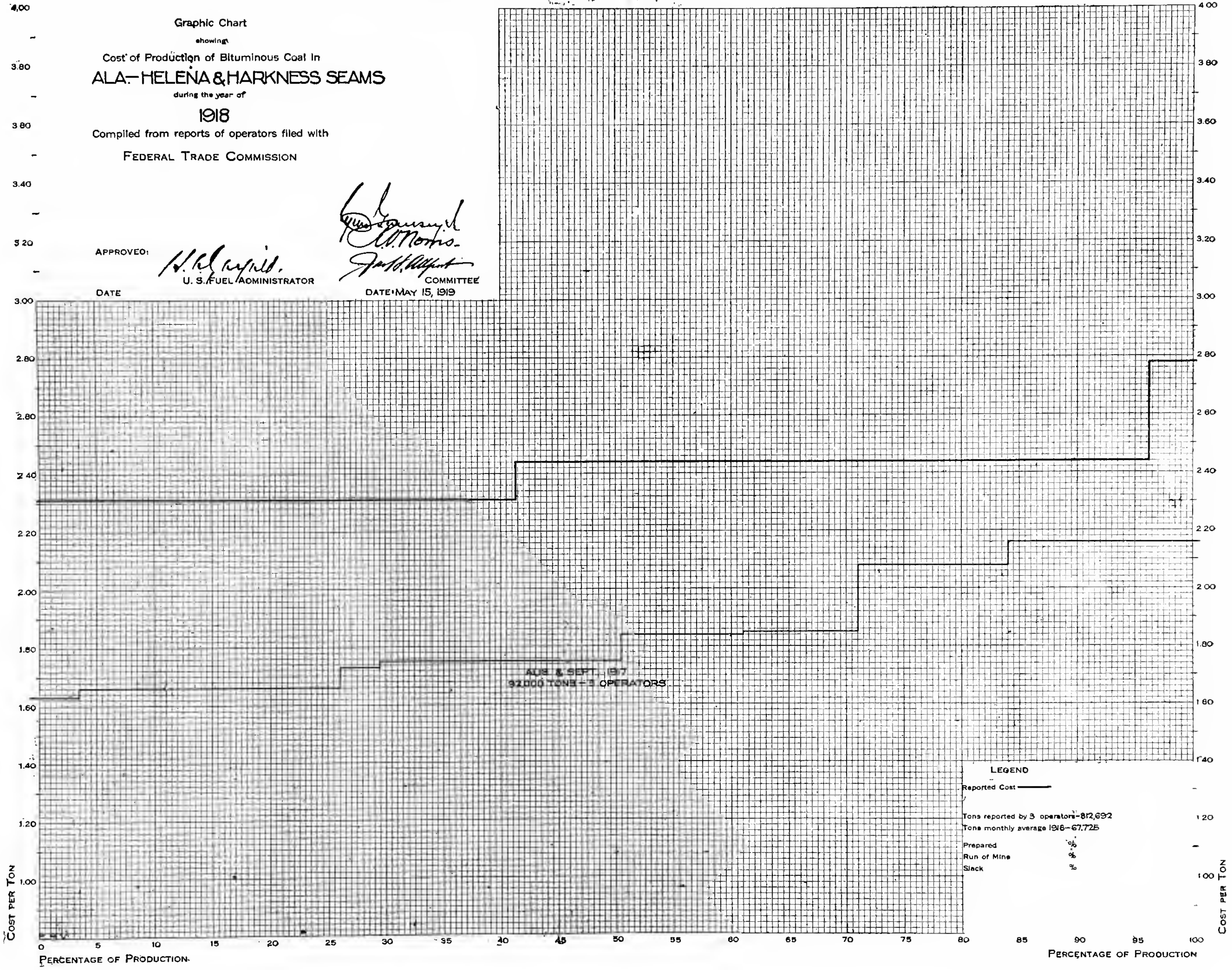
UNITED STATES FUEL ADMINISTRATION

No. 110

Graphic Chart
showing
Cost of Production of Bituminous Coal in
ALA.–HELENA & HARKNESS SEAMS
during the year of
1918
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR
DATE

COMMITTEE
DATE: MAY 15, 1919



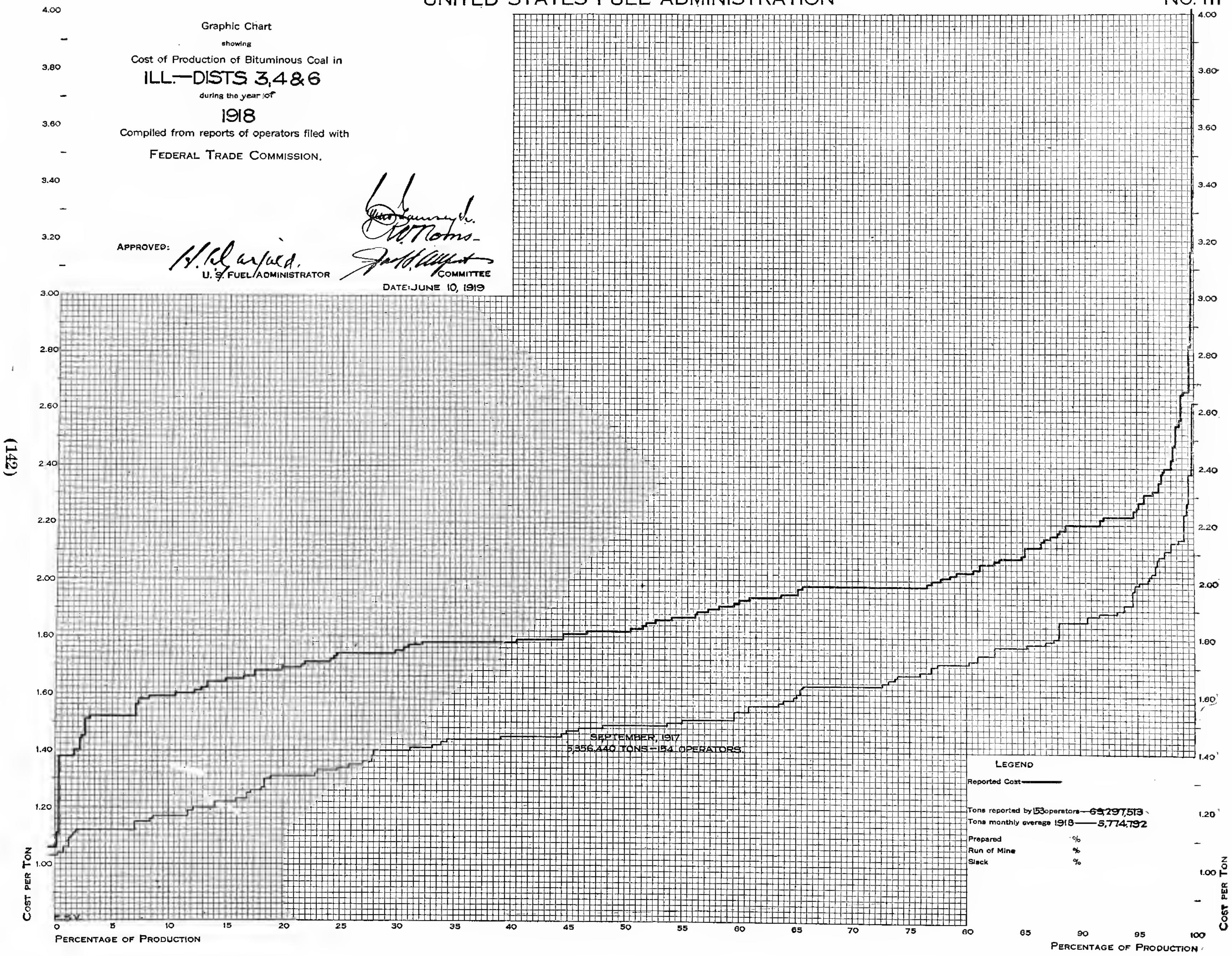
UNITED STATES FUEL ADMINISTRATION

No. III

Graphic Chart
showing
Cost of Production of Bituminous Coal in
ILL.—DISTS 3,4 & 6
during the year of
1918
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION.

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR

COMMITTEE
DATE: JUNE 10, 1919



LEGEND

Reported Cost ———

Tons reported by 153 operators—69,297,513
Tons monthly average 1918——5,774,792

Prepared %
Run of Mine %
Slack %

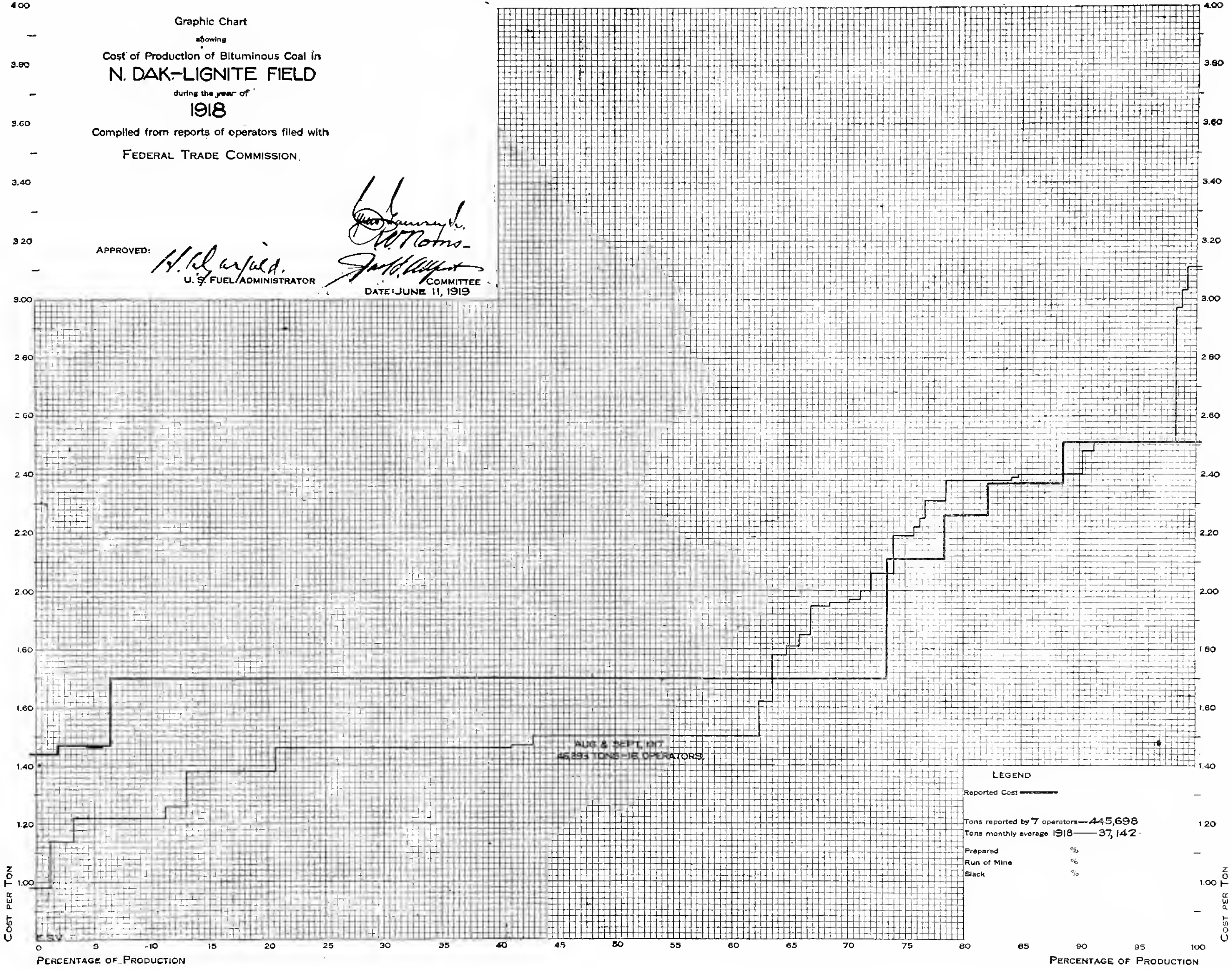
UNITED STATES FUEL ADMINISTRATION

No. 112

Graphic Chart
showing
Cost of Production of Bituminous Coal in
N. DAK.-LIGNITE FIELD
during the year of
1918
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION.

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR

COMMITTEE
DATE: JUNE 11, 1919



Tons reported by 7 operators—445,698
Tons monthly average 1918——37,142

Prepared %
Run of Mine %
Slack %

UNITED STATES FUEL ADMINISTRATION

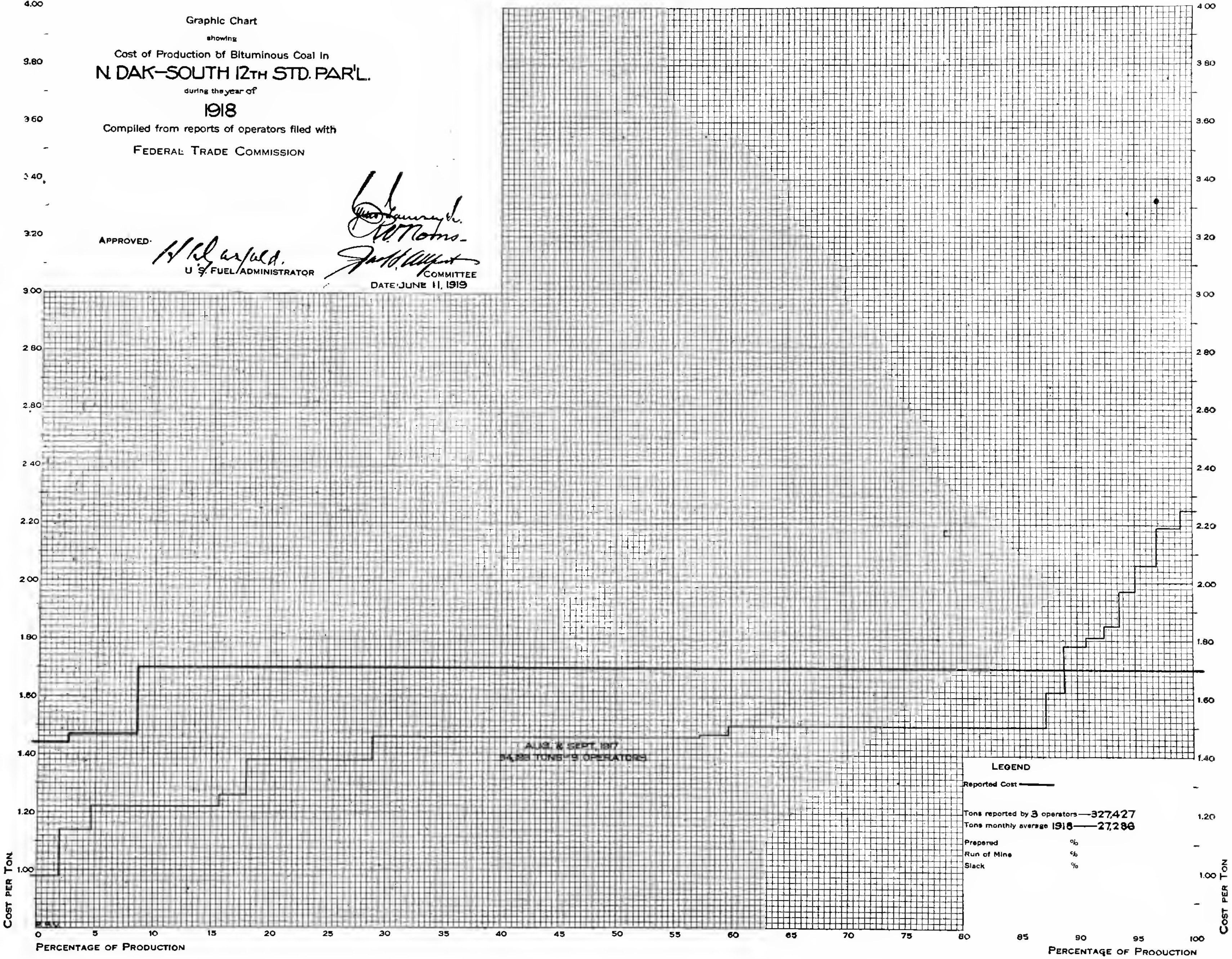
No. 113

Graphic Chart
showing
Cost of Production of Bituminous Coal in
N. DAK-SOUTH 12TH STD. PAR'L.
during the year of
1918
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H A Garfield
U. S. FUEL ADMINISTRATOR

COMMITTEE

DATE: JUNE 11, 1919



Tons reported by 3 operators—327,427
Tons monthly average 1918—27,286
Prepared %
Run of Mine %
Slack %

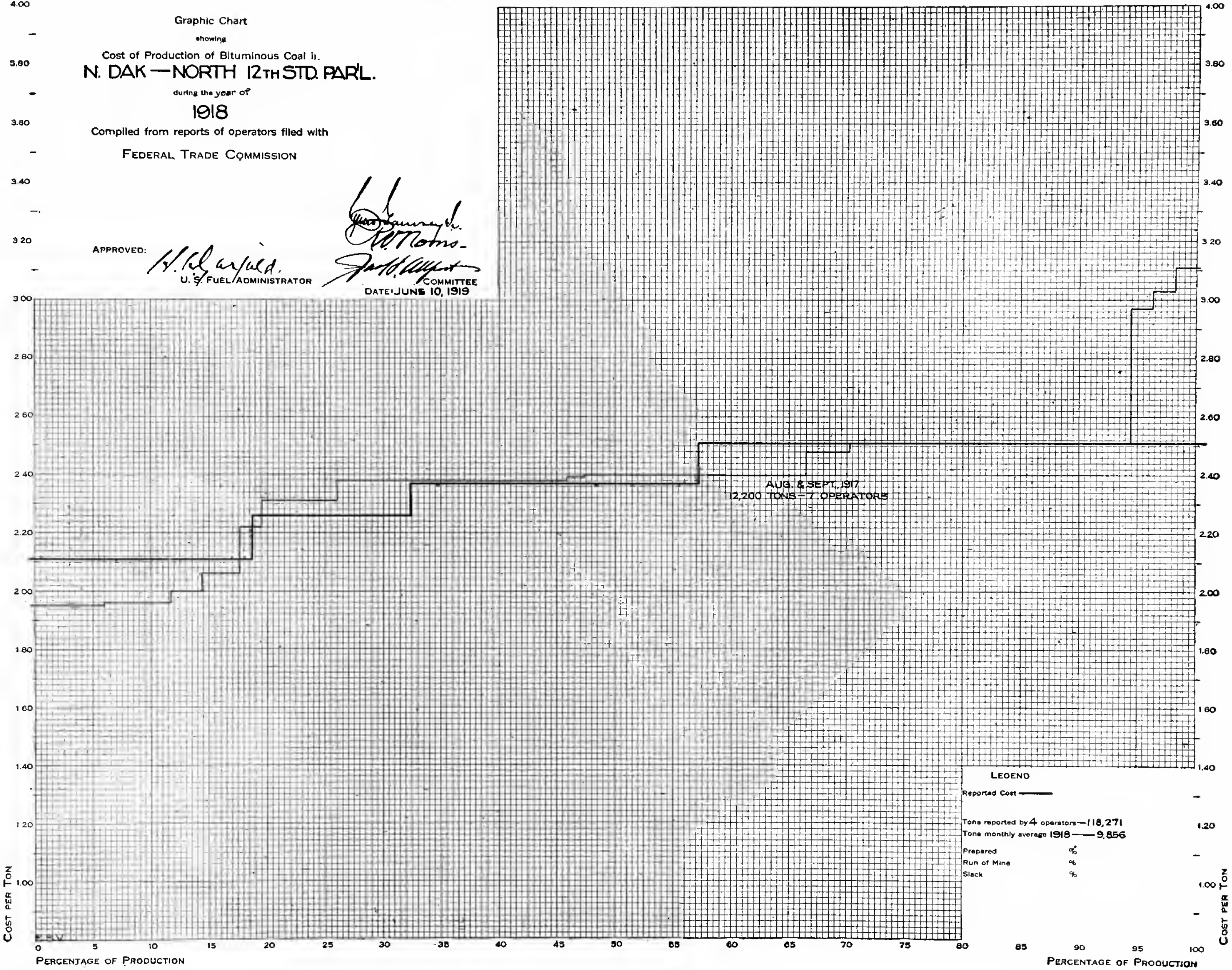
UNITED STATES FUEL ADMINISTRATION

No. 114

Graphic Chart
showing
Cost of Production of Bituminous Coal in
N. DAK—NORTH 12TH STD. PAR'L.
during the year of
1918
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR

COMMITTEE
DATE: JUNE 10, 1919



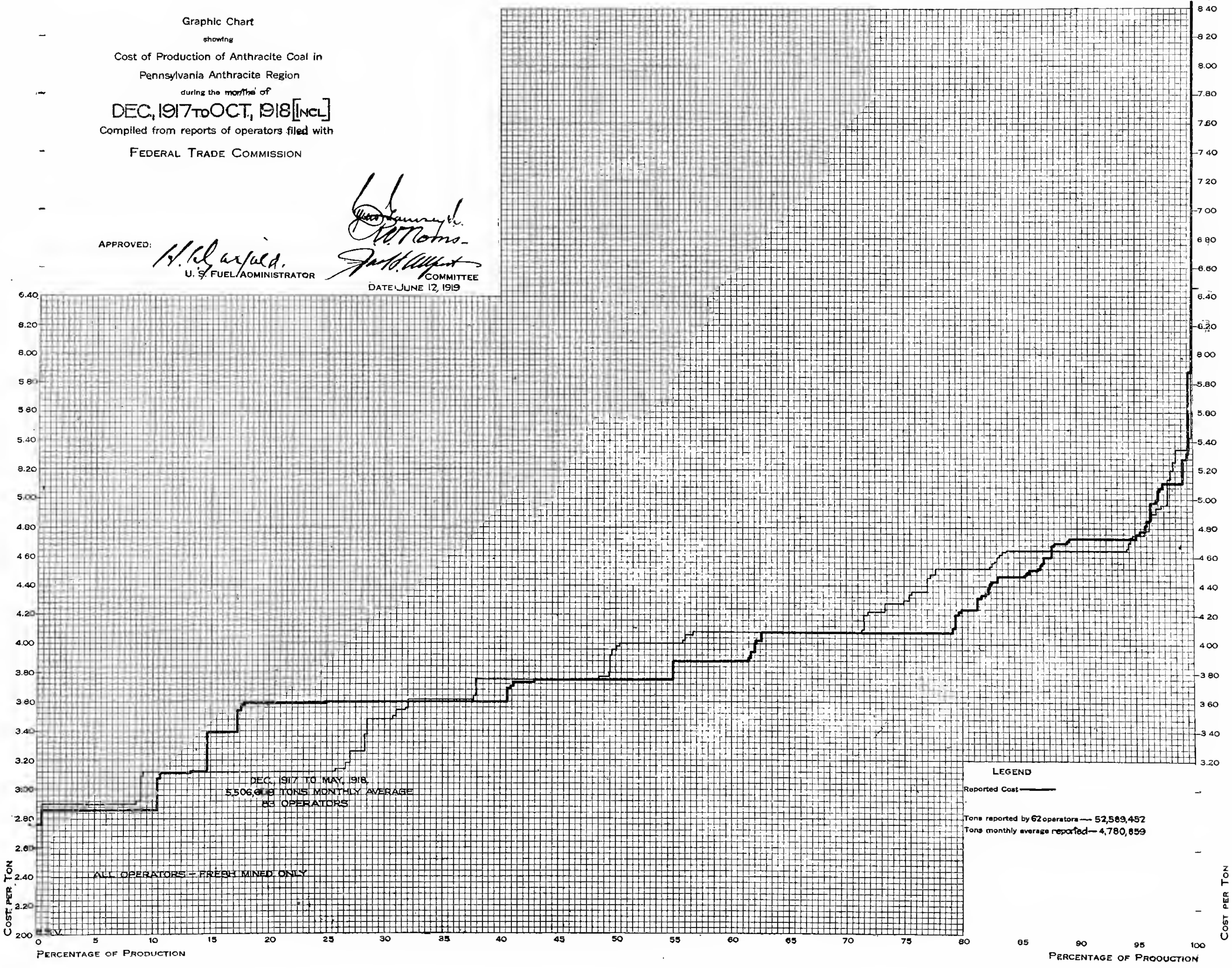
UNITED STATES FUEL ADMINISTRATION

No. 115

Graphic Chart
showing
Cost of Production of Anthracite Coal in
Pennsylvania Anthracite Region
during the months of
DEC, 1917 TO OCT, 1918 [INCL]
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR

W. B. Morris.
COMMITTEE
DATE JUNE 12, 1919



Tons reported by 62 operators — 52,589,452
Tons monthly average reported — 4,780,859

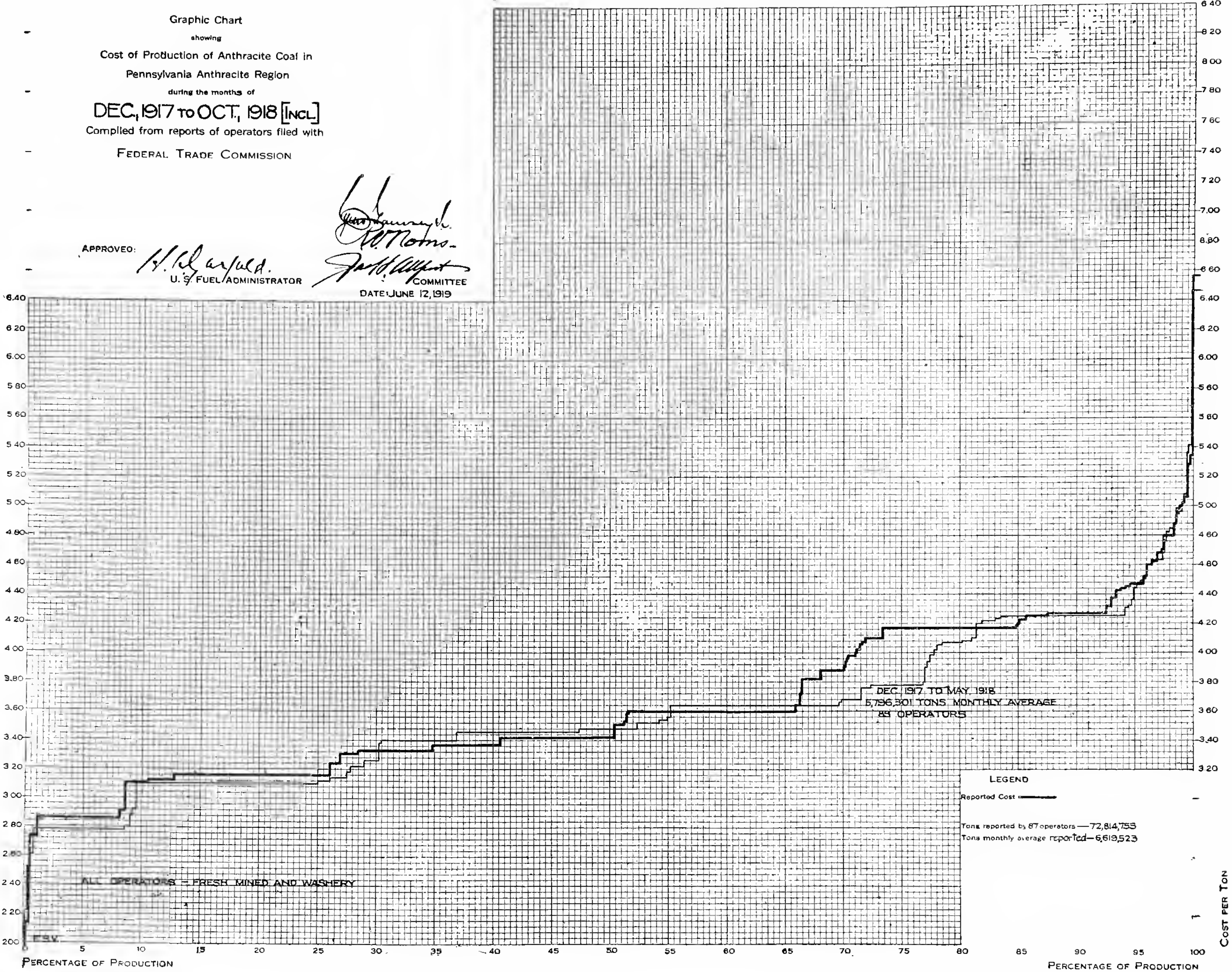
UNITED STATES FUEL ADMINISTRATION

No. 116

Graphic Chart
showing
Cost of Production of Anthracite Coal in
Pennsylvania Anthracite Region
during the months of
DEC, 1917 TO OCT, 1918 [INCL]
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR

COMMITTEE
DATE: JUNE 12, 1919



Tons reported by 87 operators — 72,814,753
Tons monthly average reported — 6,619,523

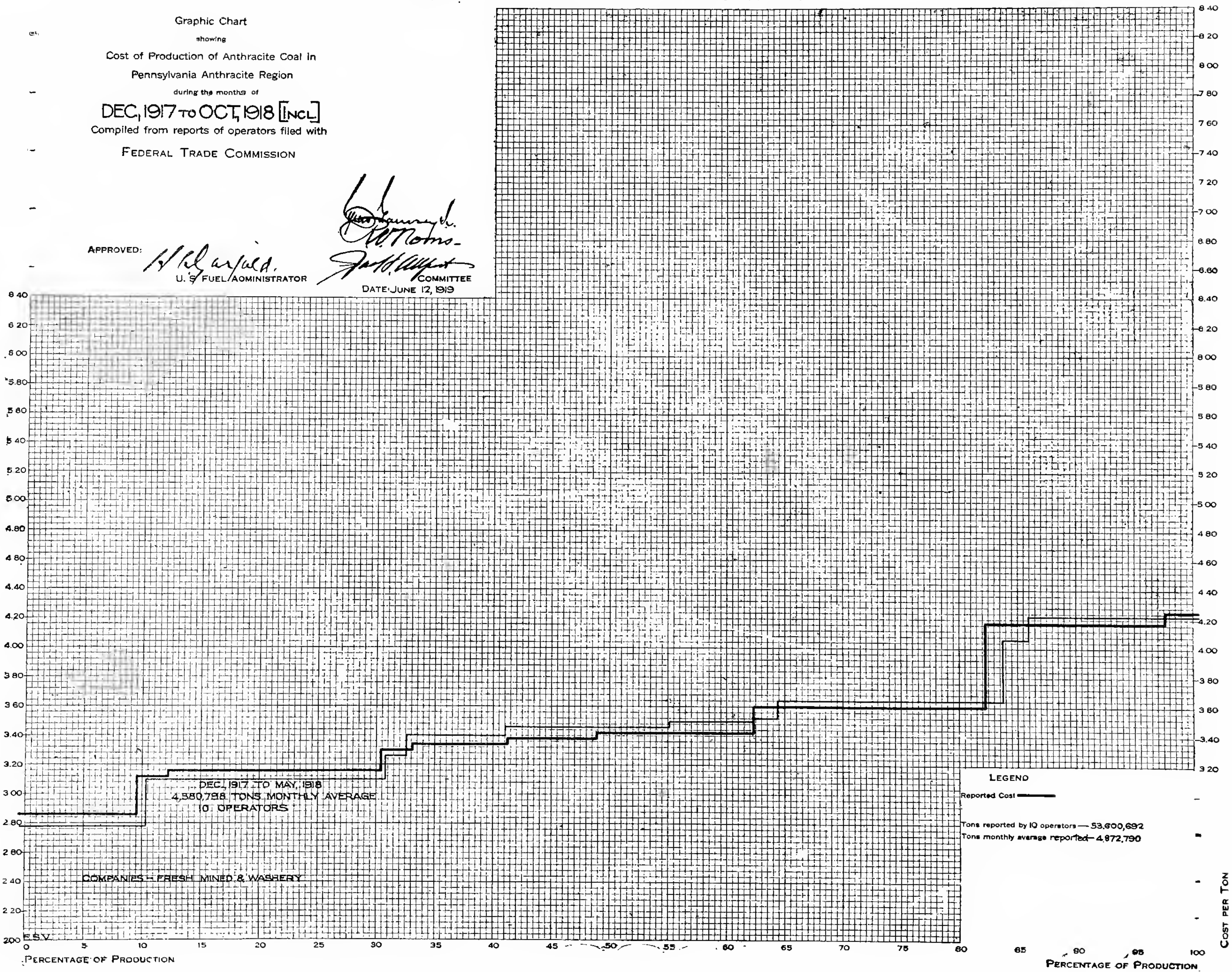
UNITED STATES FUEL ADMINISTRATION

No. 117

Graphic Chart
showing
Cost of Production of Anthracite Coal in
Pennsylvania Anthracite Region
during the months of
DEC, 1917 TO OCT, 1918 [INCL]
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR

COMMITTEE
DATE: JUNE 12, 1919



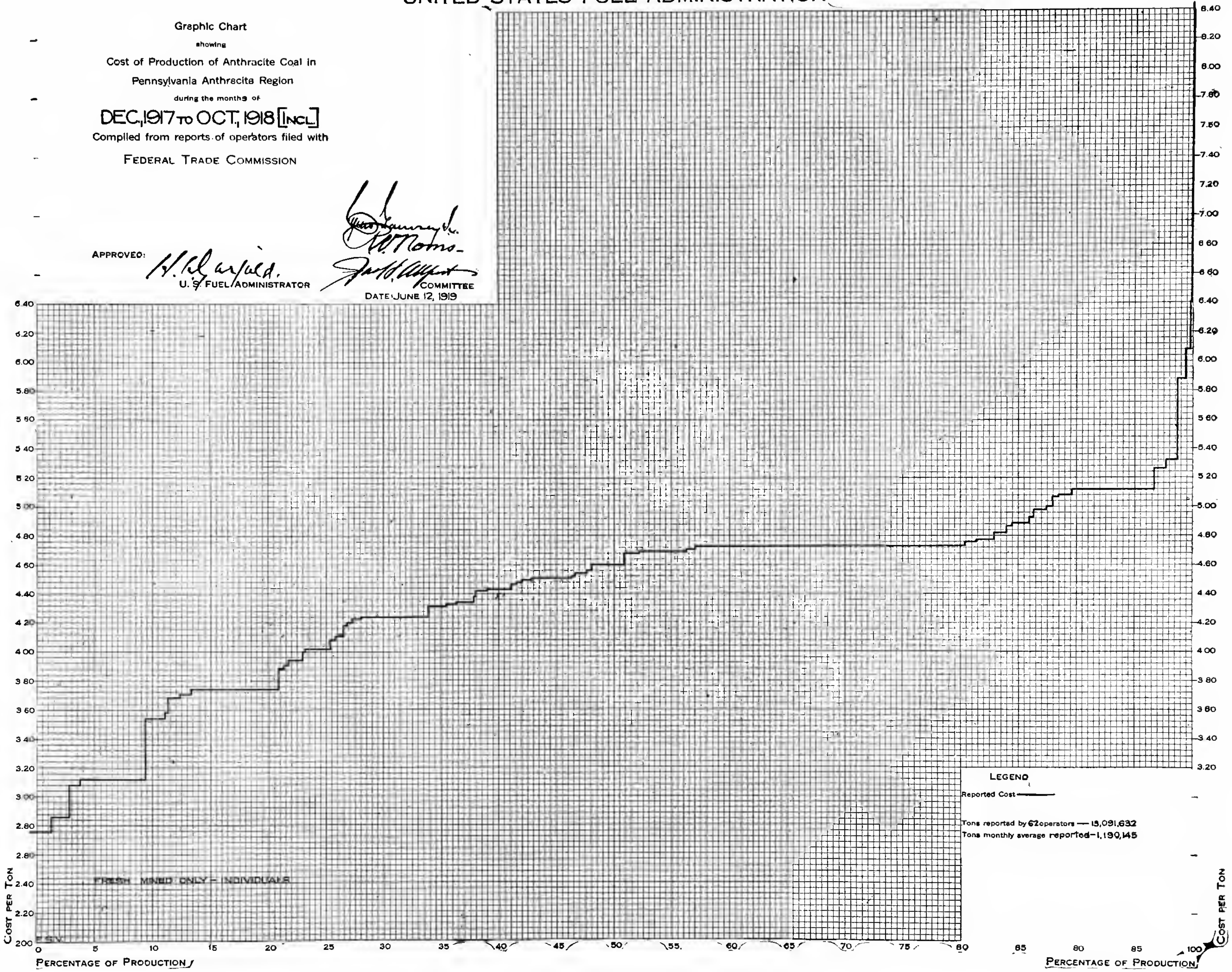
UNITED STATES FUEL ADMINISTRATION

No. 118

Graphic Chart
showing
Cost of Production of Anthracite Coal in
Pennsylvania Anthracite Region
during the months of
DEC. 1917 TO OCT. 1918 [INCL.]
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR

COMMITTEE
DATE: JUNE 12, 1919



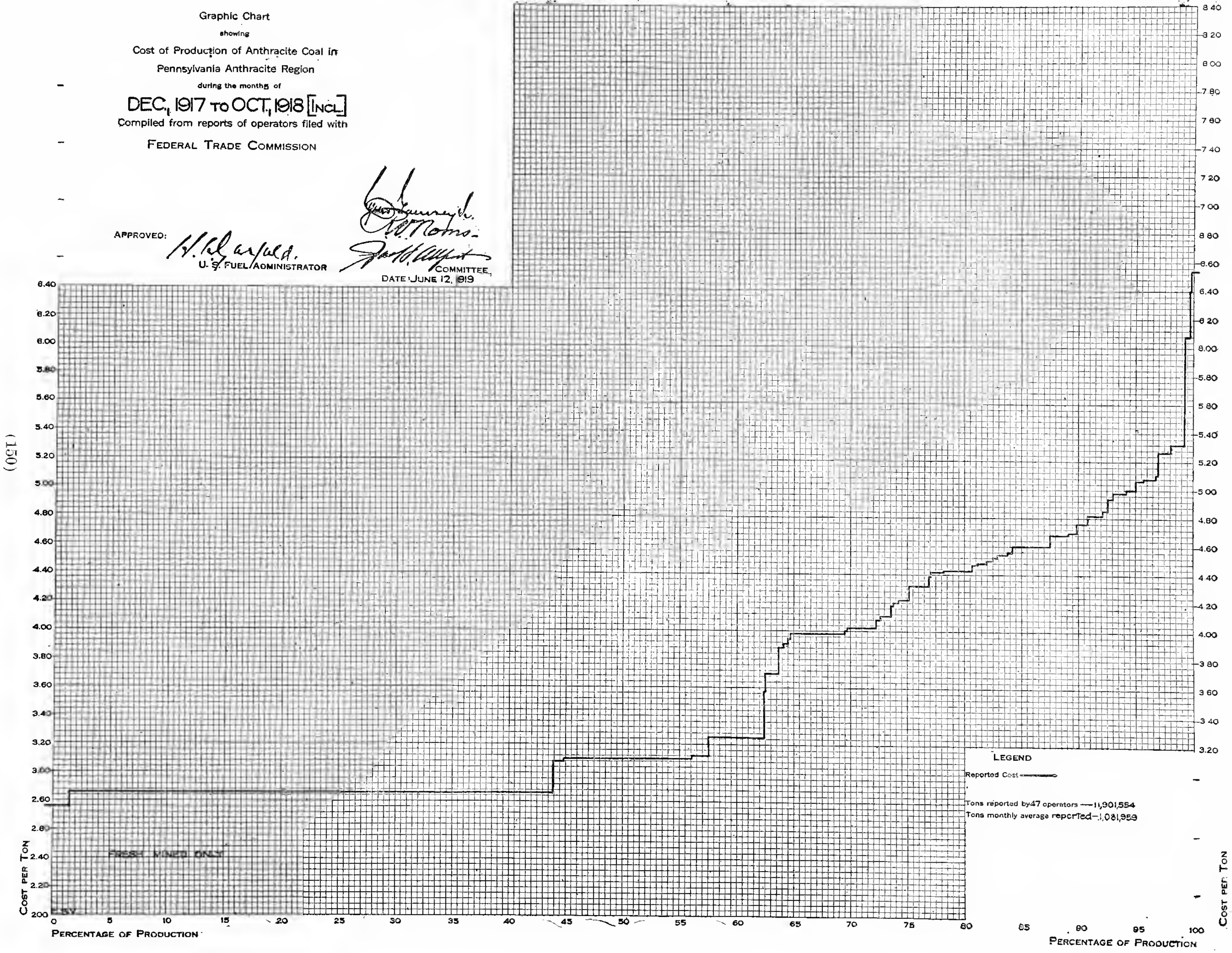
UNITED STATES FUEL ADMINISTRATION

No. 119

Graphic Chart
showing
Cost of Production of Anthracite Coal in
Pennsylvania Anthracite Region
during the months of
DEC, 1917 TO OCT, 1918 [INCL]
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR

COMMITTEE
DATE JUNE 12, 1919



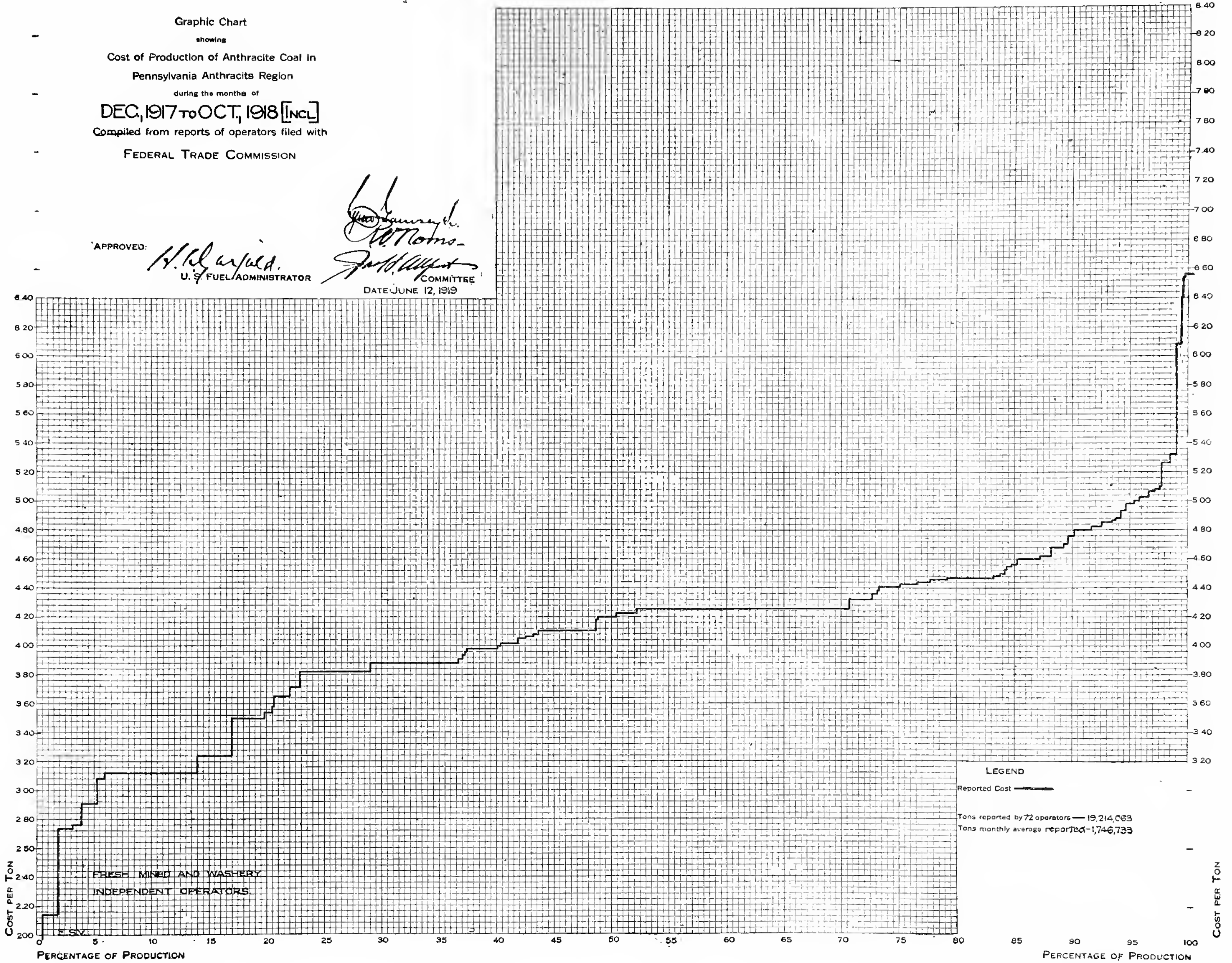
UNITED STATES FUEL ADMINISTRATION

No. 120

Graphic Chart
showing
Cost of Production of Anthracite Coal in
Pennsylvania Anthracite Region
during the months of
DEC, 1917 TO OCT, 1918 [INCL]
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR

COMMITTEE
DATE JUNE 12, 1919



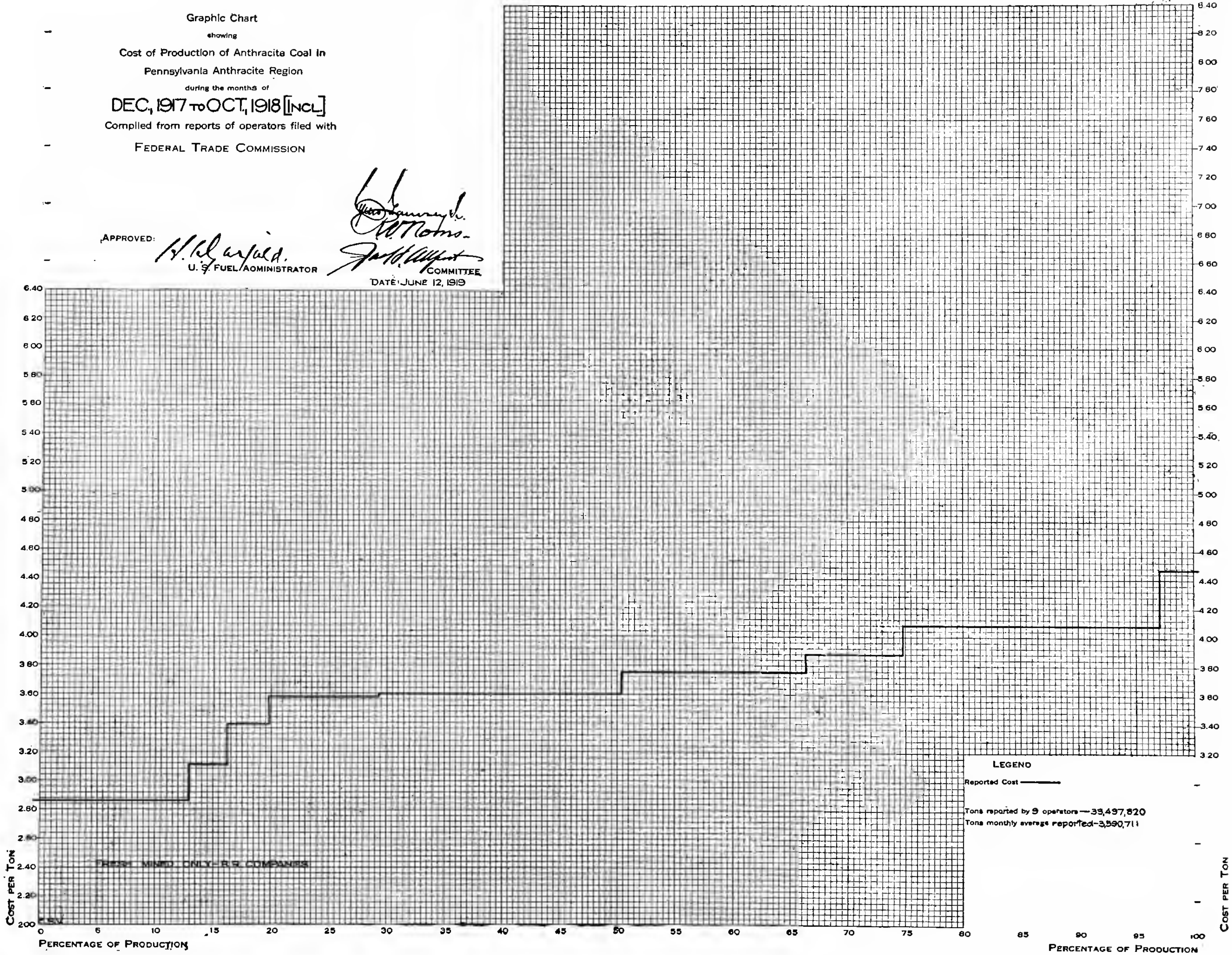
UNITED STATES FUEL ADMINISTRATION

No. 121

Graphic Chart
showing
Cost of Production of Anthracite Coal in
Pennsylvania Anthracite Region
during the months of
DEC. 1917 TO OCT. 1918 [INCL.]
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR

COMMITTEE
DATE: JUNE 12, 1919



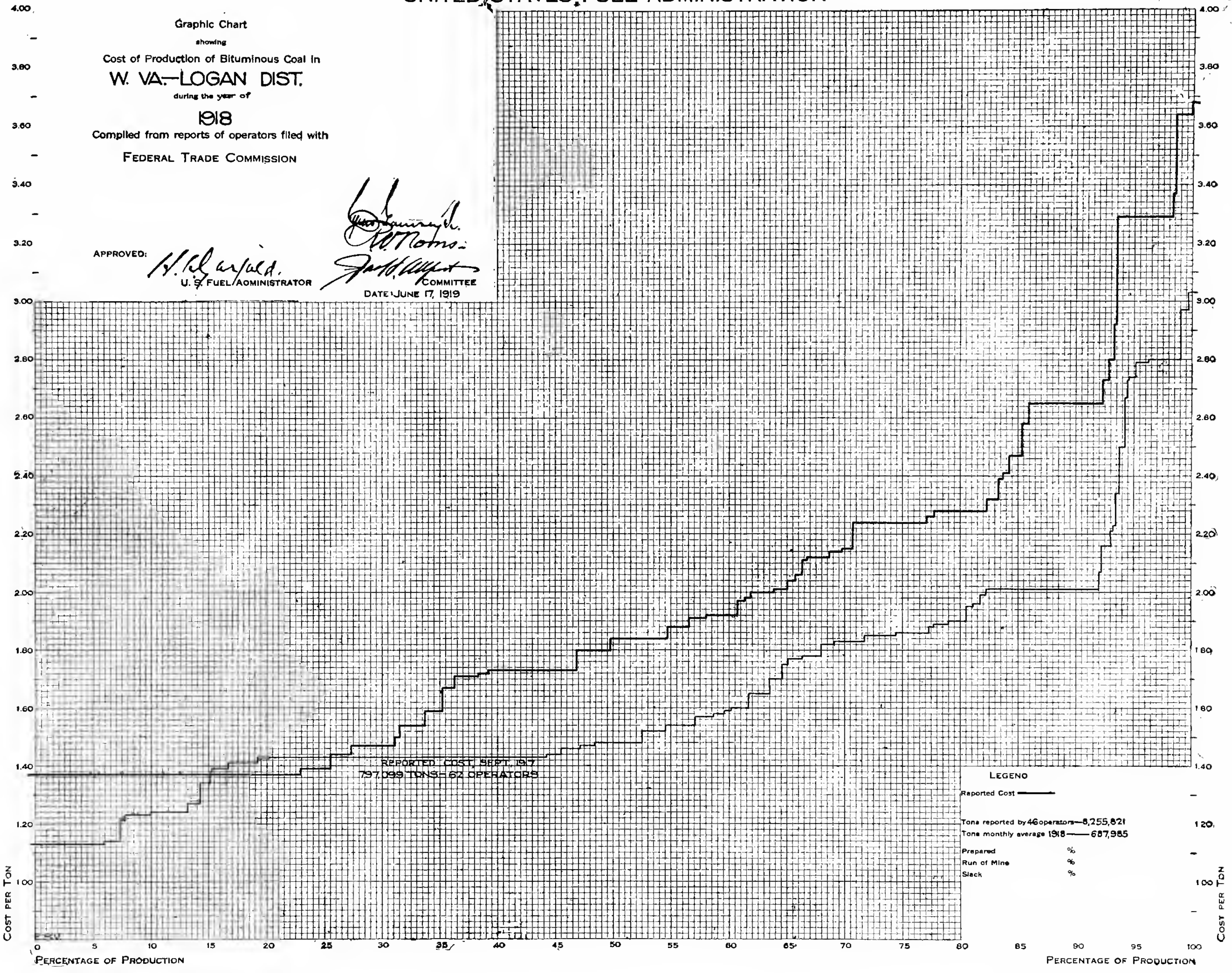
UNITED STATES FUEL ADMINISTRATION

No. 122

Graphic Chart
showing
Cost of Production of Bituminous Coal in
W. VA.—LOGAN DIST.
during the year of
1918
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR

COMMITTEE
DATE: JUNE 17, 1919



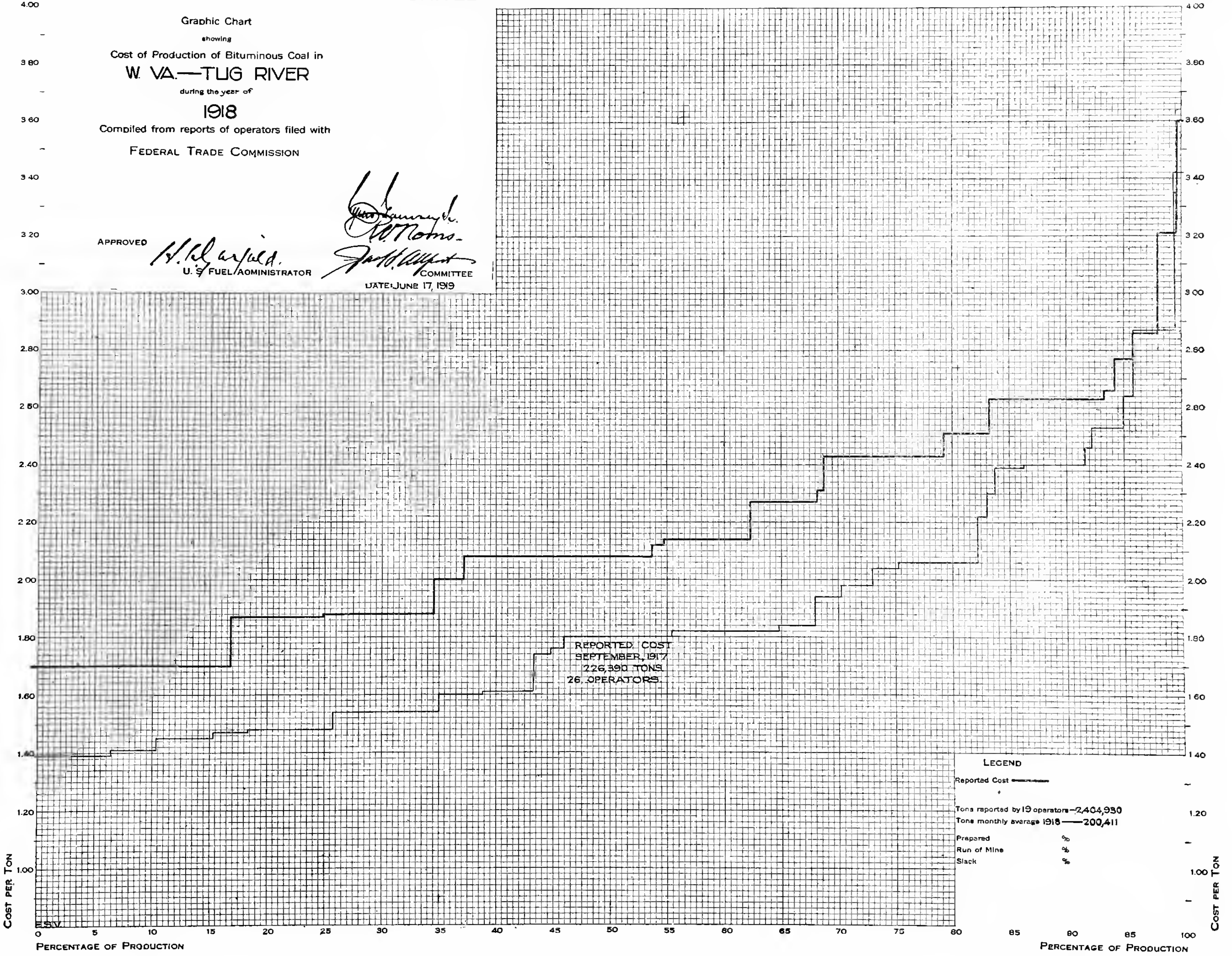
UNITED STATES FUEL ADMINISTRATION

No. 123

Graphic Chart
showing
Cost of Production of Bituminous Coal in
W. VA.—TUG RIVER
during the year of
1918
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED H. A. Garfield.
U. S. FUEL ADMINISTRATOR

COMMITTEE
DATE: JUNE 17, 1919



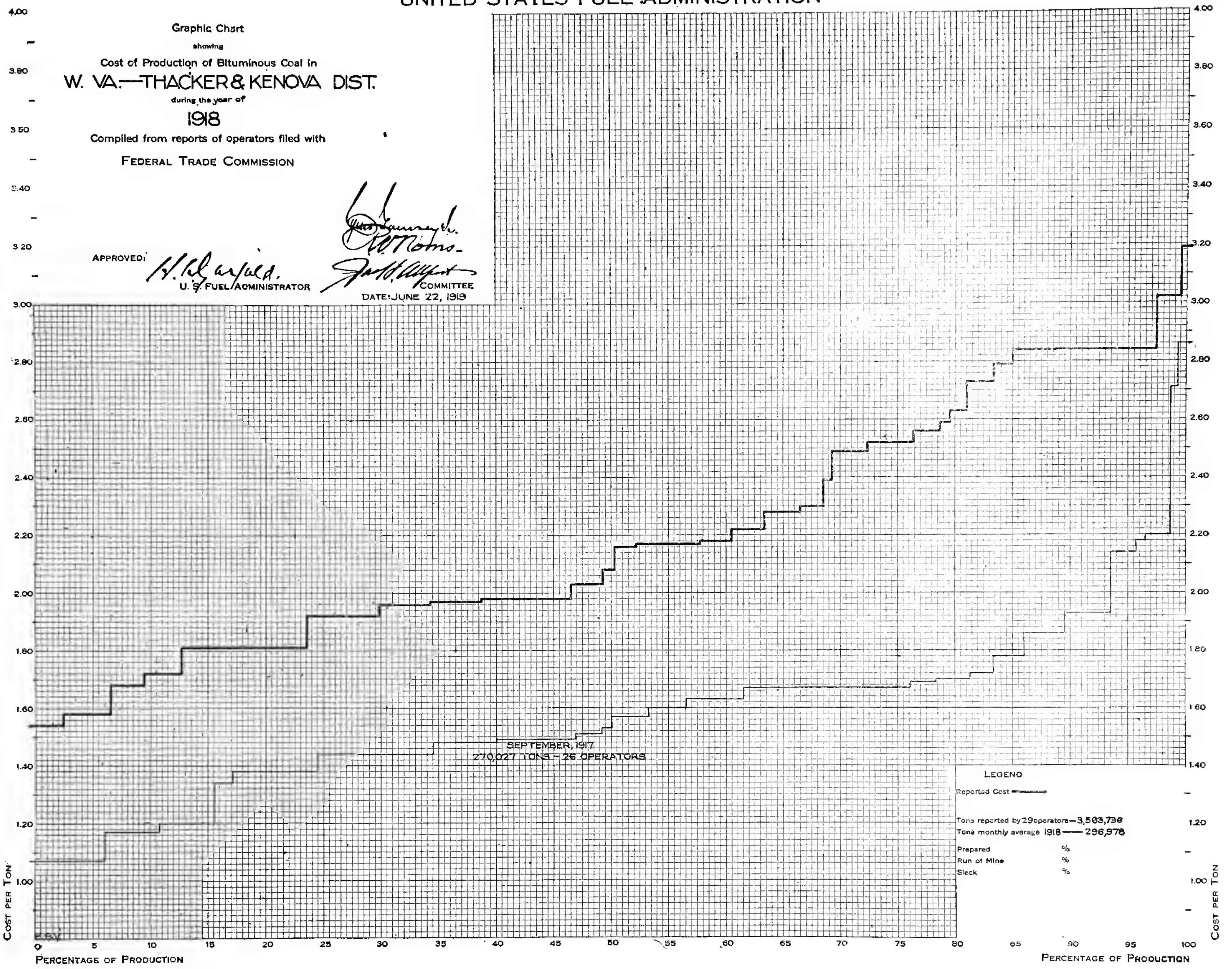
UNITED STATES FUEL ADMINISTRATION

No. 124

Graphic Chart
showing
Cost of Production of Bituminous Coal in
W. VA.—THACKER & KENOVA DIST.
during the year of
1918
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR

COMMITTEE
DATE: JUNE 22, 1919



LEGEND
Reported Cost ———
Tons reported by 29 operators—3,563,736
Tons monthly average 1918 —— 296,978
Prepared %
Run of Mine %
Sleck %

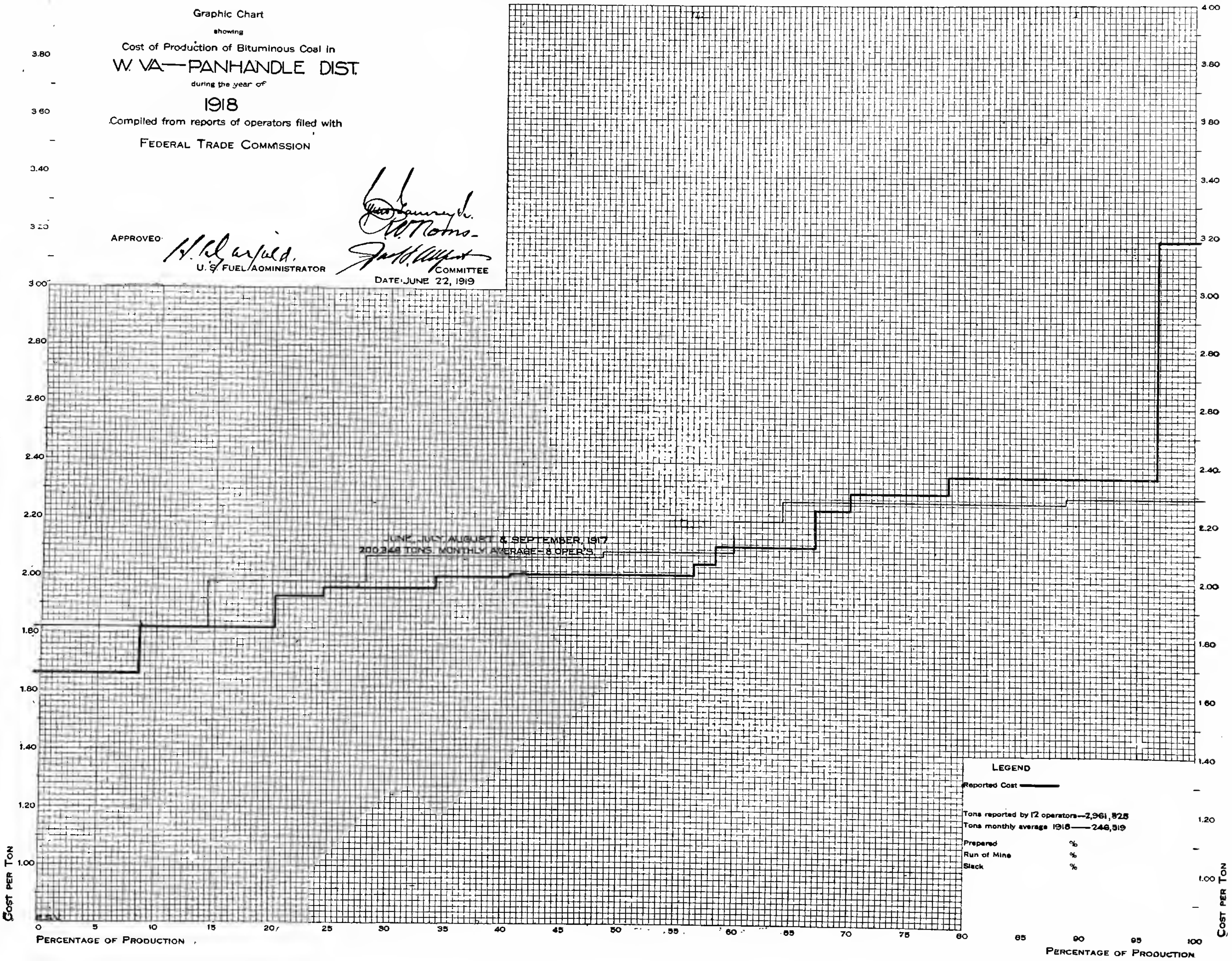
UNITED STATES FUEL ADMINISTRATION

No. 125

Graphic Chart
showing
Cost of Production of Bituminous Coal in
W. VA.—PANHANDLE DIST.
during the year of
1918
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED H. A. Garfield.
U. S. FUEL ADMINISTRATOR

COMMITTEE
DATE: JUNE 22, 1919



LEGEND

Reported Cost ▬▬

Tons reported by 12 operators—2,961,828
Tons monthly average 1918——246,519

Prepared %
Run of Mine %
Slack %

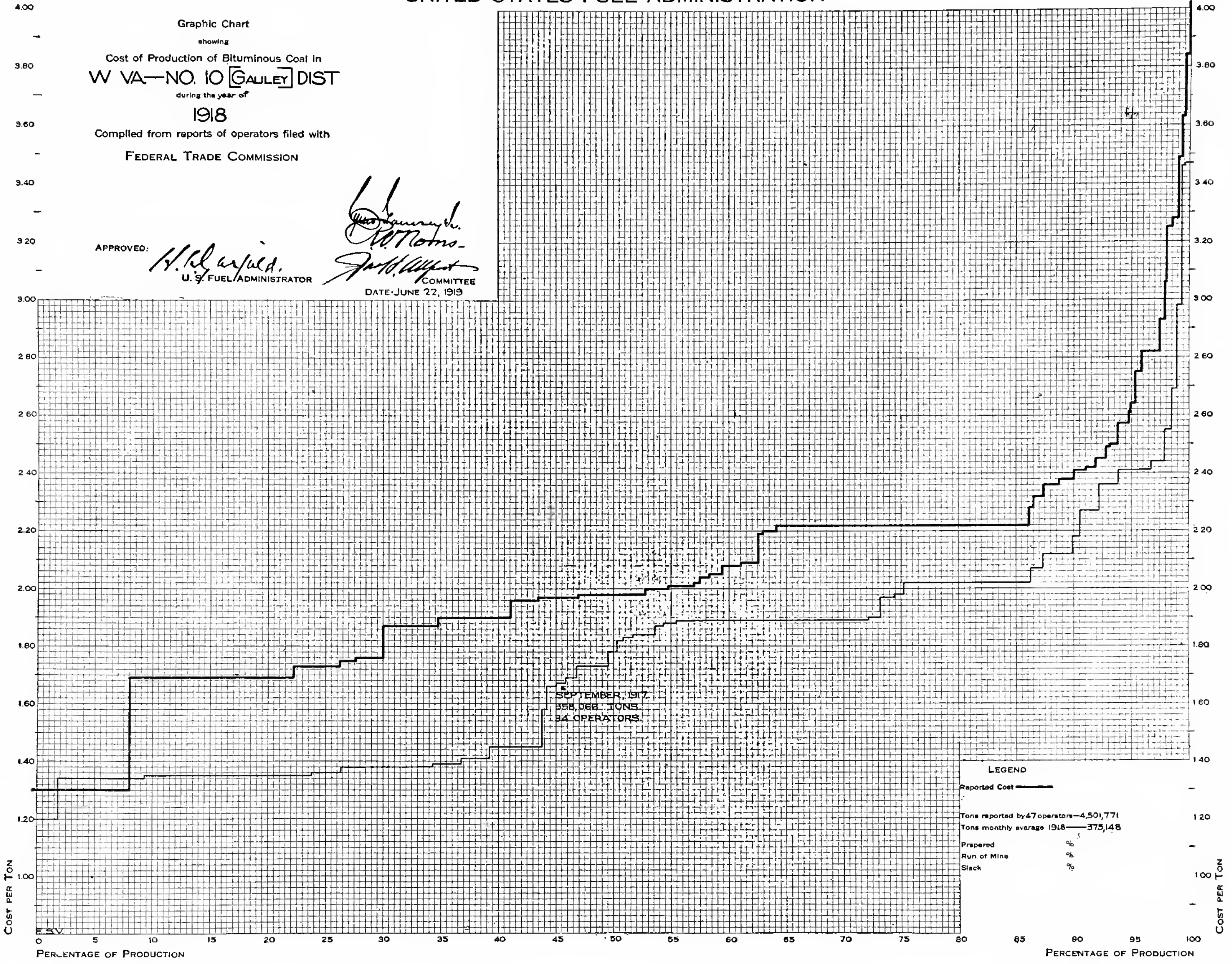
UNITED STATES FUEL ADMINISTRATION

No. 126

Graphic Chart
showing
Cost of Production of Bituminous Coal in
W VA—NO. 10 [Gauley] DIST
during the year of
1918
Compiled from reports of operators filed with
Federal Trade Commission

APPROVED: H. A. Garfield.
U. S. Fuel Administrator

Committee
Date: June 22, 1919



Legend

Reported Cost ━━━

Tons reported by 47 operators—4,501,771
Tons monthly average 1918——375,148

Prepared %
Run of Mine %
Slack %

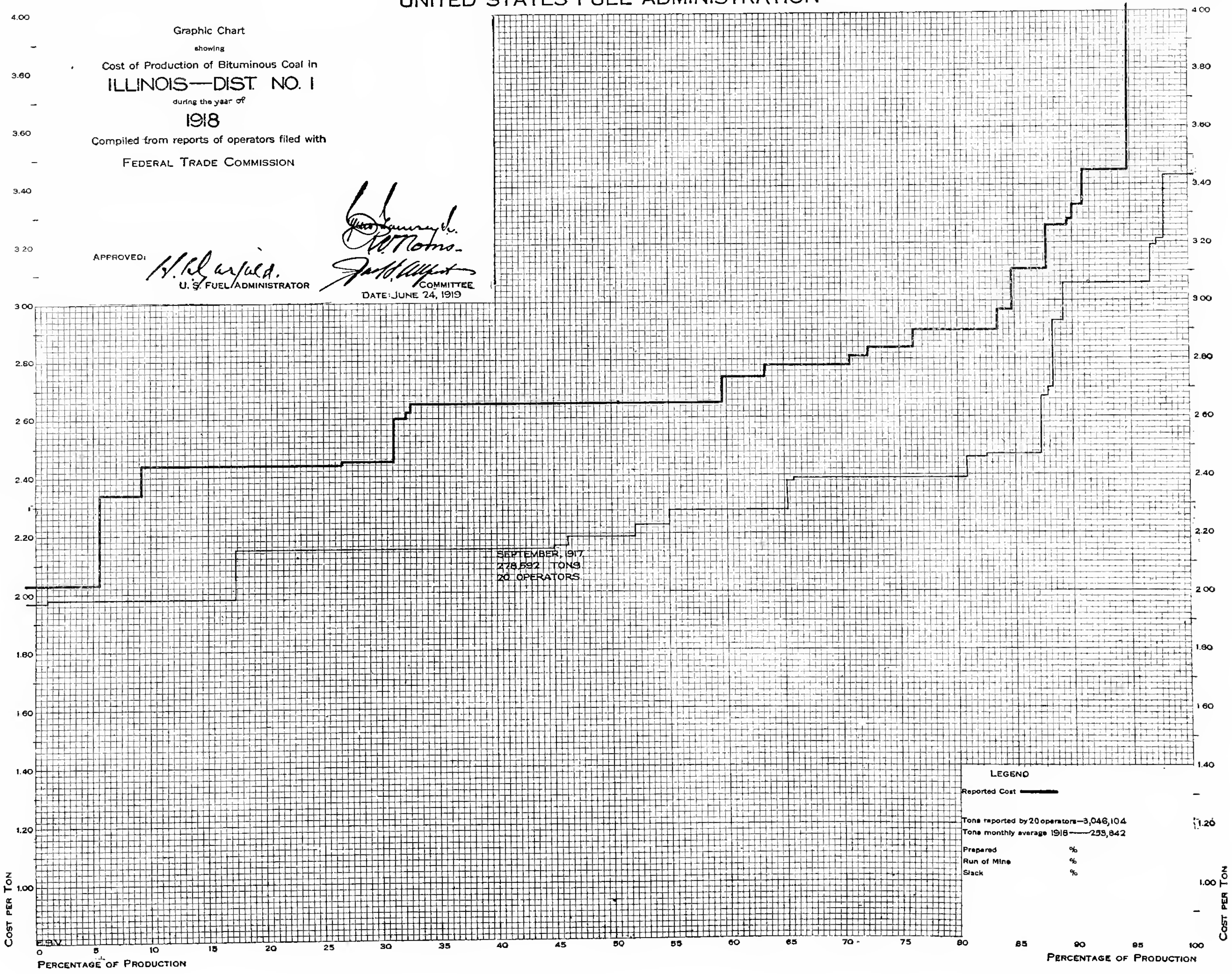
UNITED STATES FUEL ADMINISTRATION

No. 127

Graphic Chart
showing
Cost of Production of Bituminous Coal in
ILLINOIS—DIST. NO. 1
during the year of
1918
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

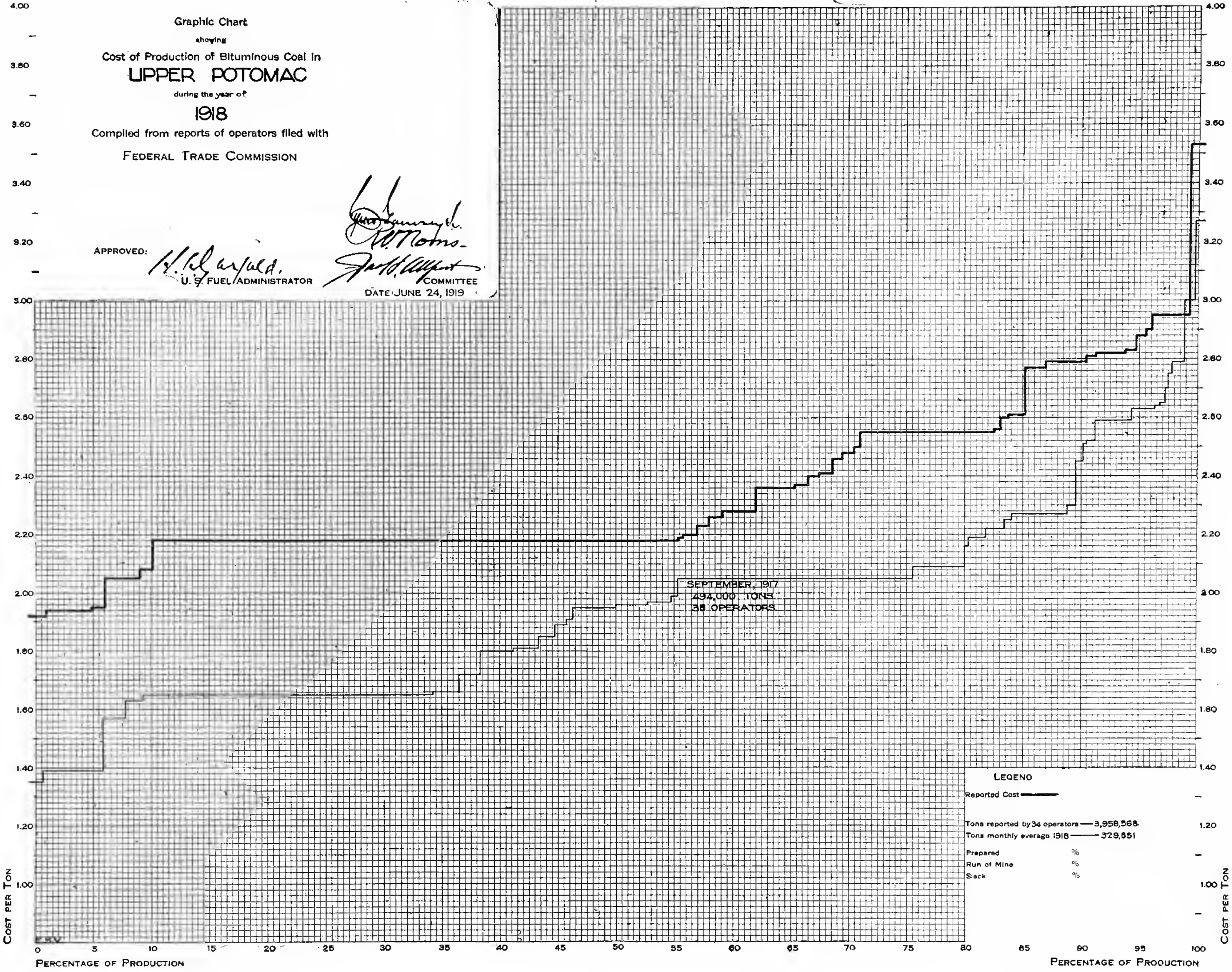
APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR

COMMITTEE
DATE: JUNE 24, 1919



UNITED STATES FUEL ADMINISTRATION

No. 128



Graphic Chart
showing
Cost of Production of Bituminous Coal in
UPPER POTOMAC
during the year of
1918
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR

COMMITTEE
DATE JUNE 24, 1919

LEGEND
Reported Cost
Tons reported by 34 operators—3,958,568
Tons monthly average 1918—329,881
Prepared %
Run of Mine %
Slack %

UNITED STATES FUEL ADMINISTRATION

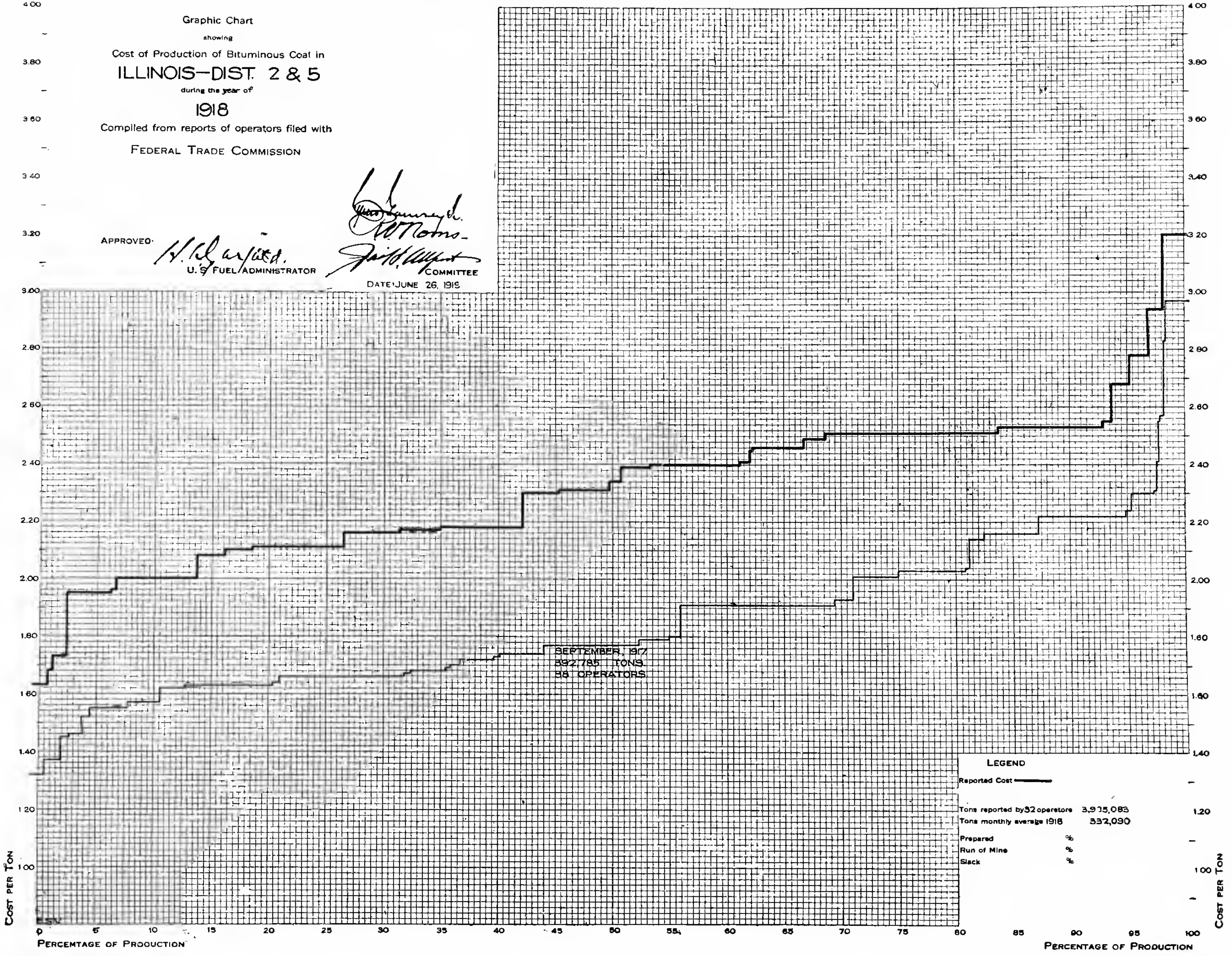
NO. 129

Graphic Chart
showing
Cost of Production of Bituminous Coal in
ILLINOIS—DIST. 2 & 5
during the year of
1918
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield
U. S. FUEL ADMINISTRATOR

COMMITTEE

DATE: JUNE 26, 1919



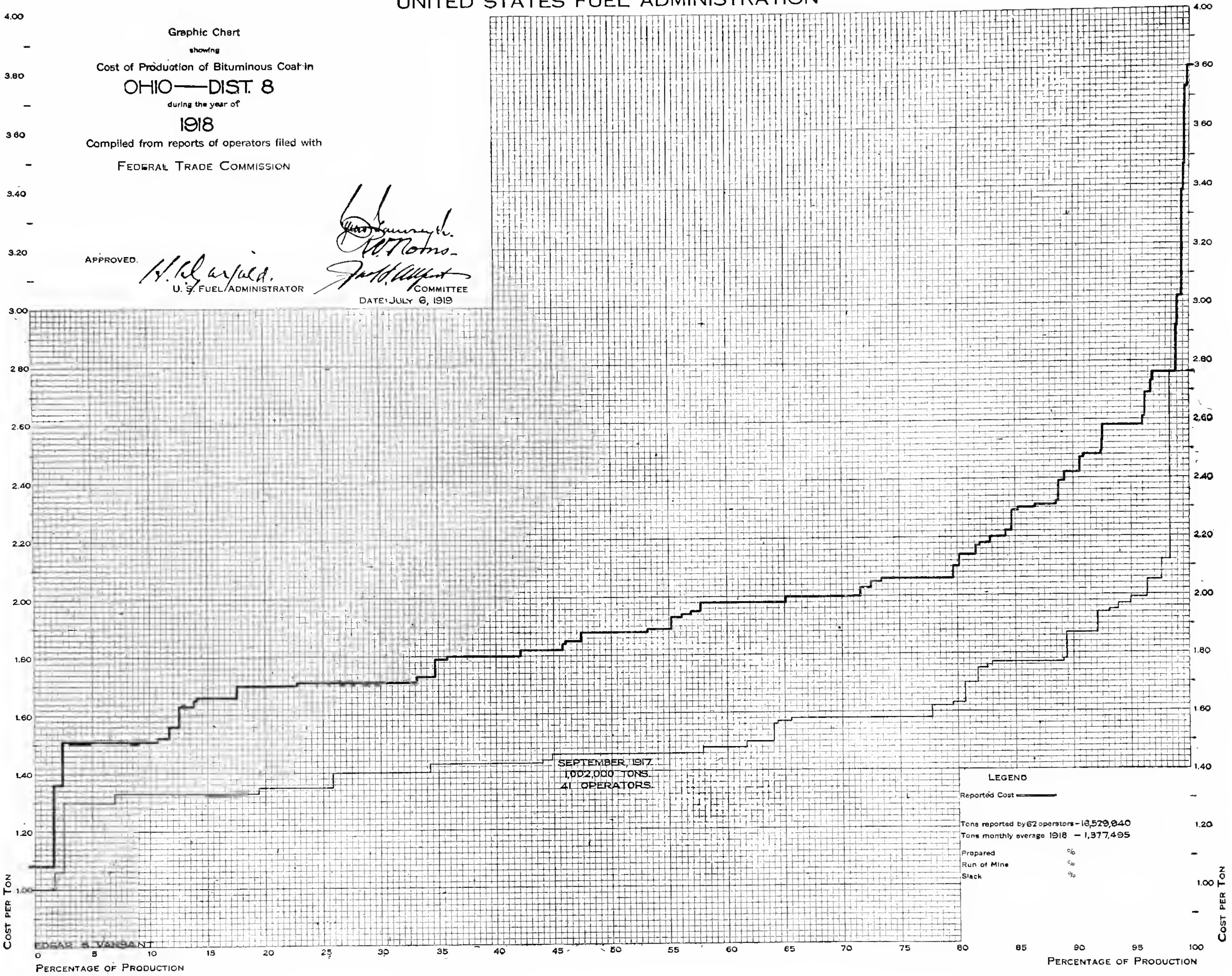
NO. 130

UNITED STATES FUEL ADMINISTRATION

Graphic Chart
showing
Cost of Production of Bituminous Coal in
OHIO—DIST. 8
during the year of
1918
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED. H. A. Garfield.
U. S. FUEL ADMINISTRATOR

COMMITTEE
DATE: JULY 6, 1919



LEGEND
Reported Cost ▬

Tons reported by 62 operators – 16,529,940
Tons monthly average 1918 – 1,377,495

Prepared %
Run of Mine %
Slack %

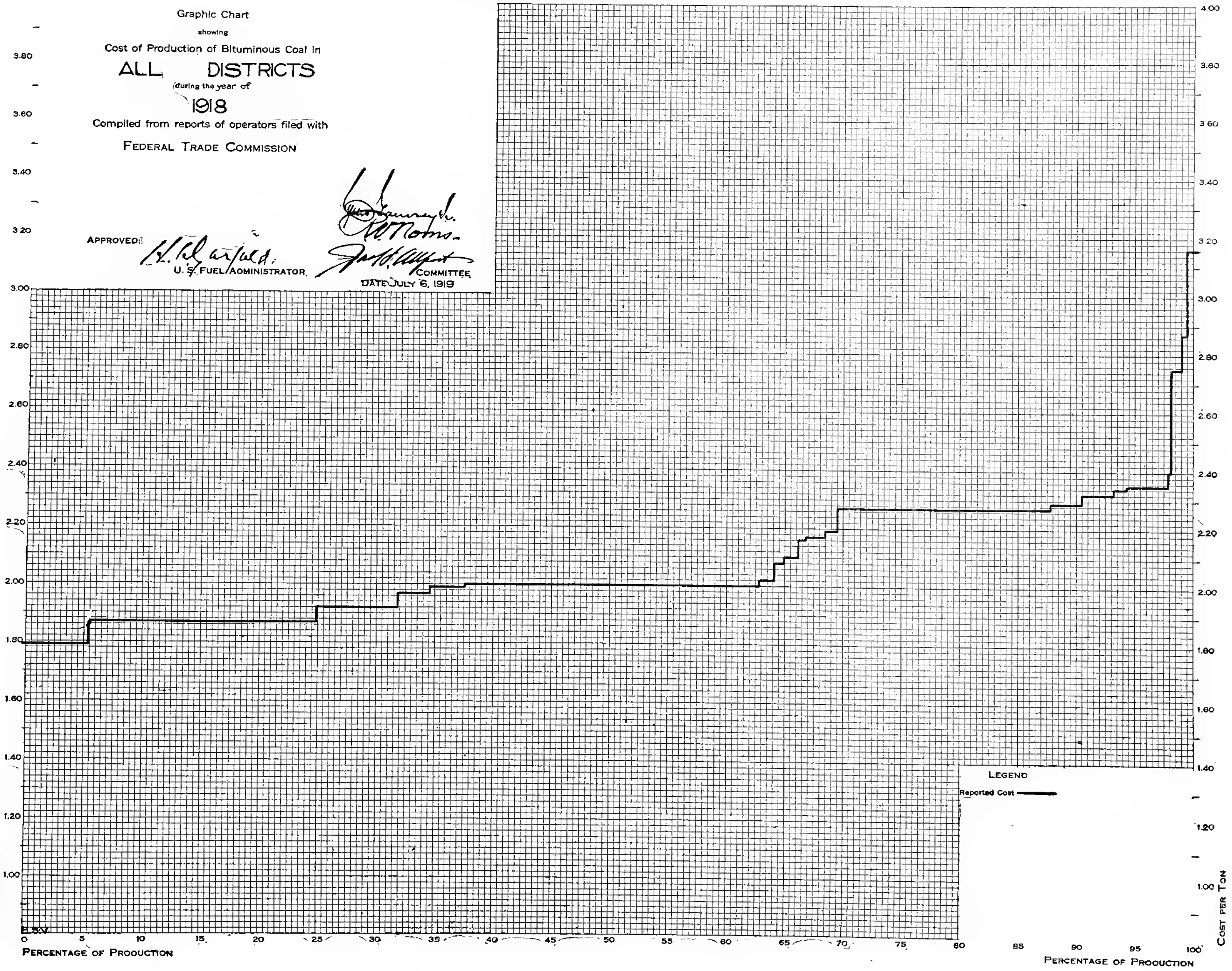
UNITED STATES FUEL ADMINISTRATION

No. 131

Graphic Chart
showing
Cost of Production of Bituminous Coal in
ALL DISTRICTS
(during the year of
1918
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

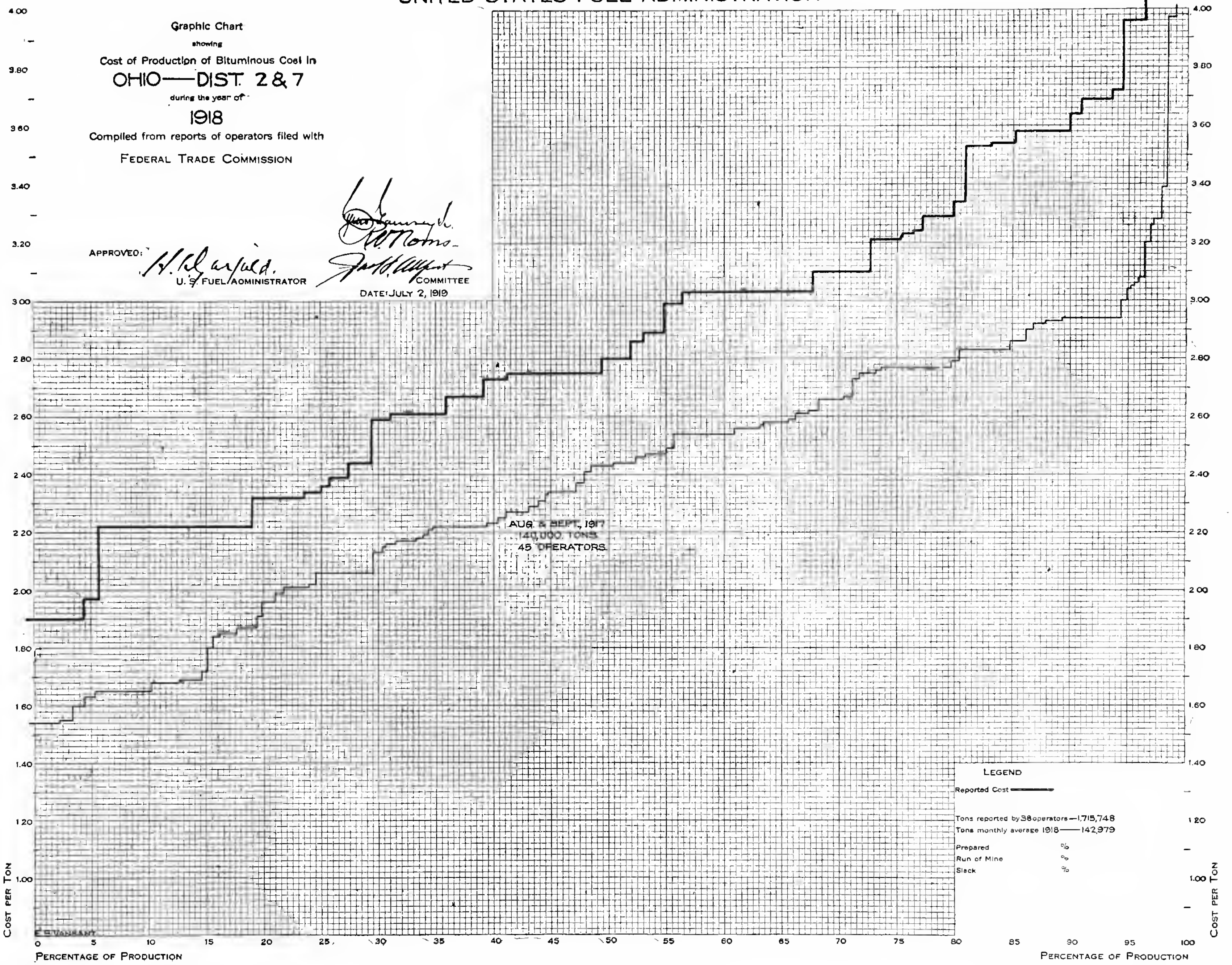
APPROVED: H. A. Garfield
U. S. FUEL ADMINISTRATOR.

COMMITTEE.
DATE JULY 6, 1919



UNITED STATES FUEL ADMINISTRATION

No. 132



Graphic Chart
showing
Cost of Production of Bituminous Coal in
OHIO—DIST. 2 & 7
during the year of
1918
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR

W. Morrow
COMMITTEE
DATE: JULY 2, 1919

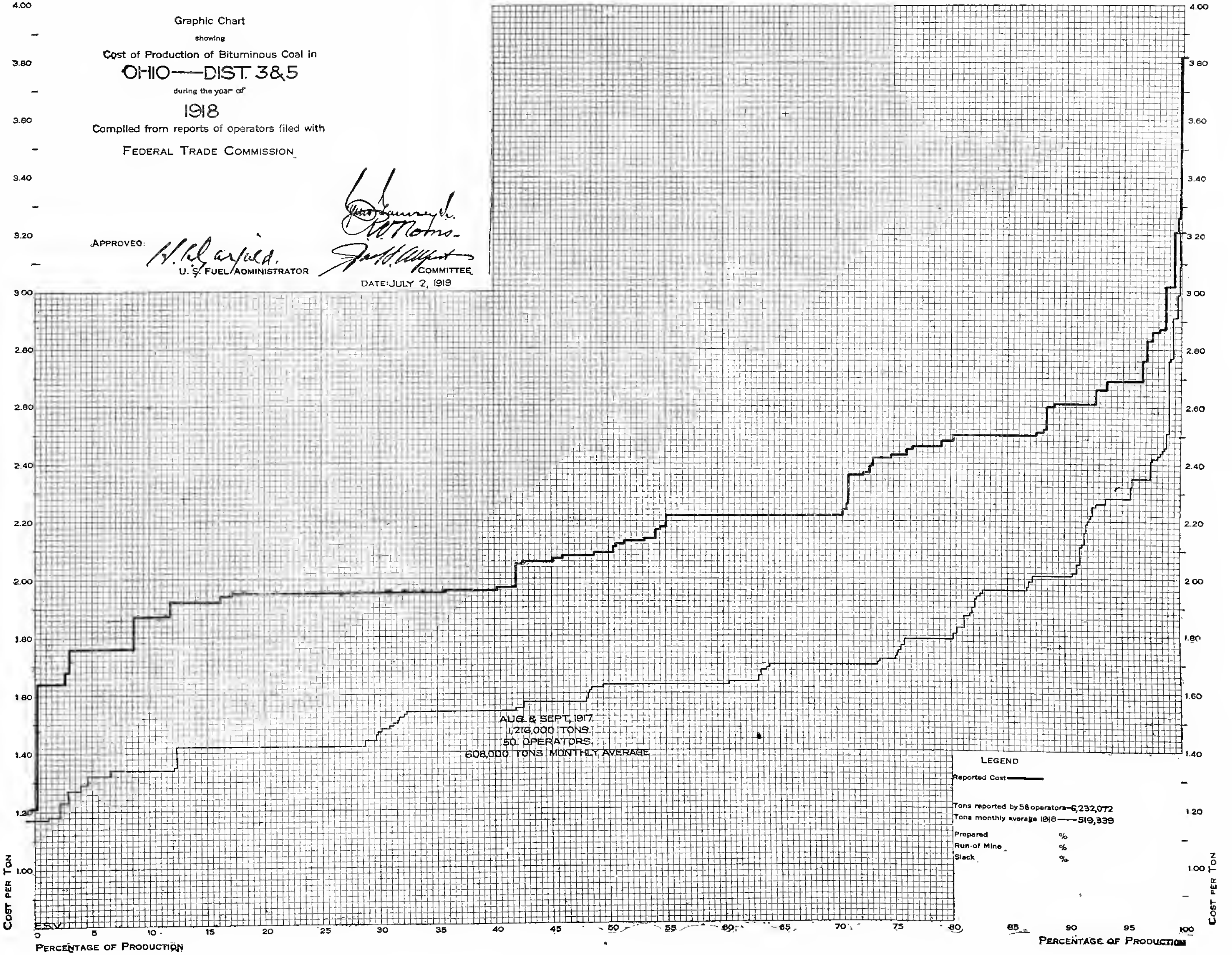
UNITED STATES FUEL ADMINISTRATION

No. 133

Graphic Chart
showing
Cost of Production of Bituminous Coal in
OHIO—DIST. 3&5
during the year of
1918
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield
U. S. FUEL ADMINISTRATOR

COMMITTEE
DATE: JULY 2, 1919



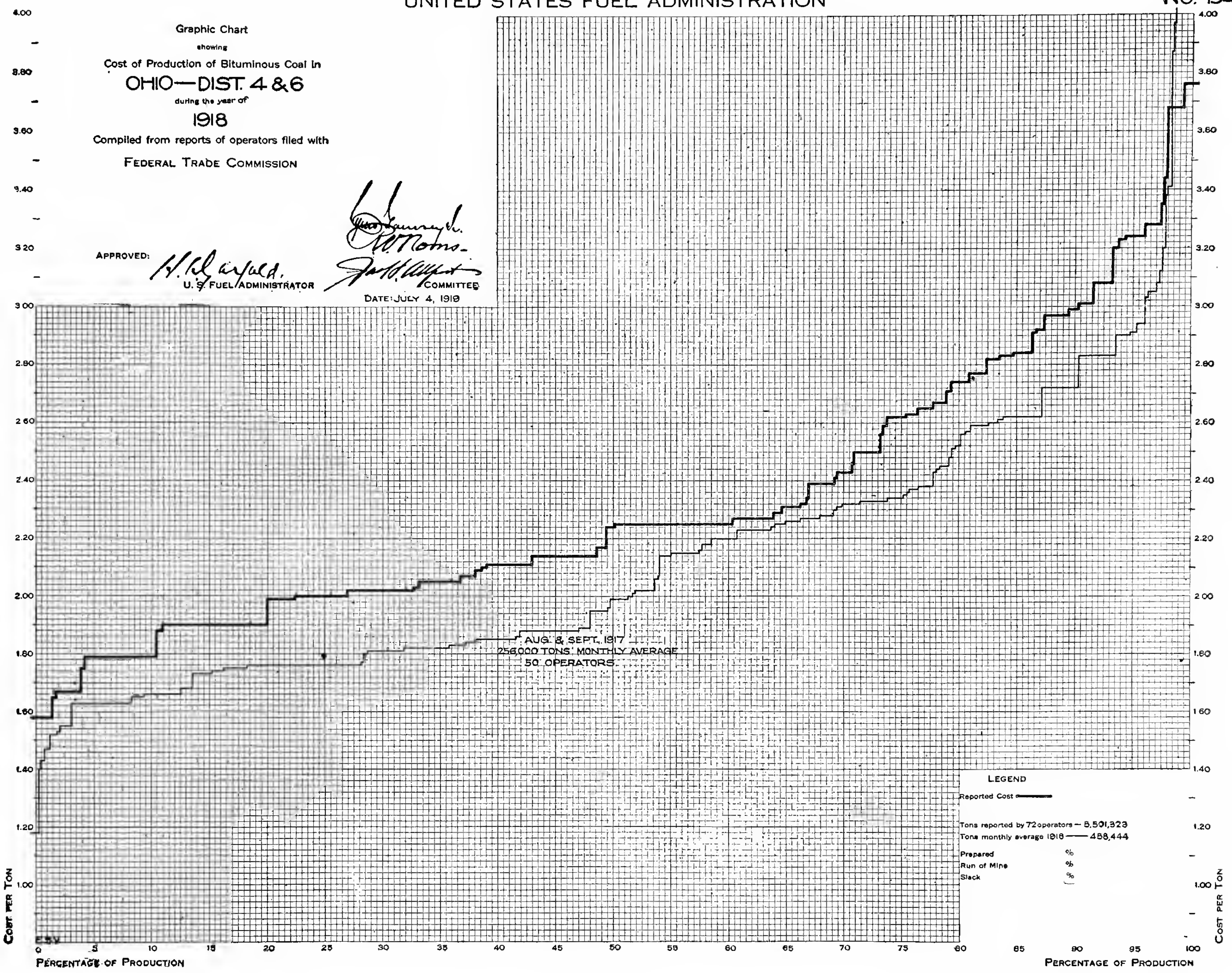
UNITED STATES FUEL ADMINISTRATION

No. 134

Graphic Chart
showing
Cost of Production of Bituminous Coal in
OHIO—DIST. 4 & 6
during the year of
1918
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR

COMMITTEE
DATE: JULY 4, 1919



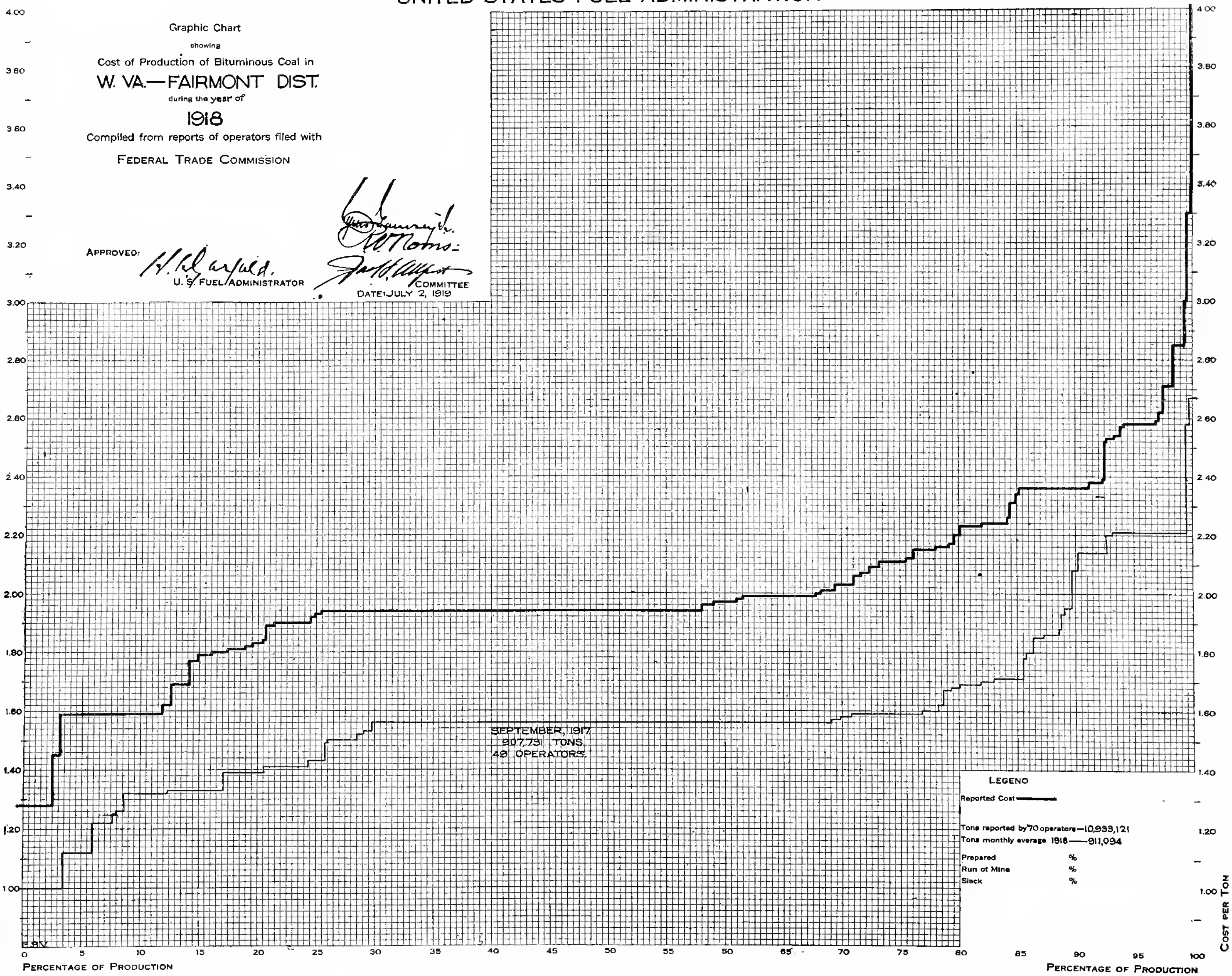
UNITED STATES FUEL ADMINISTRATION

No. 135

Graphic Chart
showing
Cost of Production of Bituminous Coal in
W. VA.—FAIRMONT DIST.
during the year of
1918
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED: H. A. Garfield.
U. S. FUEL ADMINISTRATOR

COMMITTEE
DATE: JULY 2, 1919



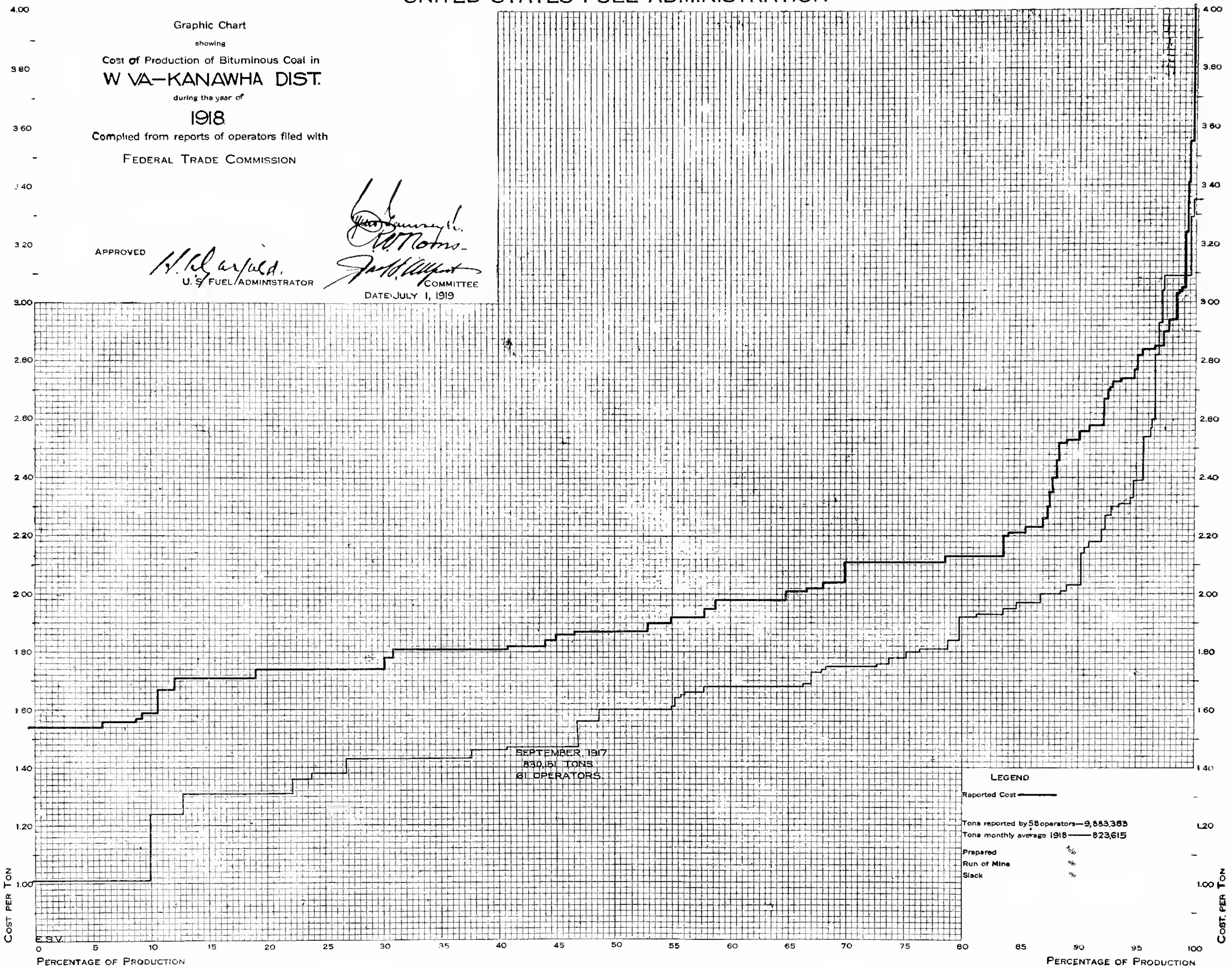
UNITED STATES FUEL ADMINISTRATION

No. 136

Graphic Chart
showing
Cost of Production of Bituminous Coal in
W VA-KANAWHA DIST.
during the year of
1918
Compiled from reports of operators filed with
FEDERAL TRADE COMMISSION

APPROVED H. A. Garfield
U. S. FUEL ADMINISTRATOR

COMMITTEE
DATE JULY 1, 1919



FEDERAL TRADE COMMISSION. **NO. 137.**

BITUMINOUS COAL REPORT ON COST, INCOME, AND TONNAGE FOR................................, 191 . FILE NO. ......
(Period, month or year.)

Location of mines.
District...............................
State...................................
County.................................

Company making this report { Full name........ ....
Address...

Mail to Federal Trade Commission, Washington, D. C., on or before.............., 1917, the information required on this form.

The information required by this report is ordered to be furnished pursuant to the power of the Commission under subdivision b of section 6 of "An Act to create a Federal Trade Commission, to define its powers and duties, and for other purposes," and under paragraph 12, section 25, of "An Act to provide further for the national security and defense by encouraging the production, conserving the supply, and controlling the distribution of food products and fuel," which is as follows:

"The books, correspondence, records, and papers in any way referring to transactions of any kind relating to the mining, production, sale, or distribution of all mine operators or other persons whose coal and coke have or may become subject to this section, and the books, correspondence, records, and papers of any person applying for the purchase of coal and coke from the United States shall at all times be subject to inspection by the said agency."

Penalties.

Failure to mail this report within the time required will subject the corporation to a forfeiture of the sum of $100 for each and every day of the continuance of such failure. Section 10, Federal Trade Commission Act.

Any person who shall willfully make or cause to be made any false entry or statement of fact in this report shall be subject to a fine of not less than $1,000 nor more than $5,000, or to imprisonment for a term of not more than three years or to both such fine and imprisonment. Section 10, Federal Trade Commission Act.

COST.

Item.	Labor.	Supplies.	Total.	
			Amount.	Per ton.
I. Mine expense.	$	$	$	
(1) Operating expense:				
(2) Mining,				
(3) Yardage,				
(4) Transportation,				
(5) Ventilation,				
(6) Drainage,				
(7) Dead work,				
(8) Tipple or breaker,				
(9) Washery,				
(10) Miscellaneous,				
(11)				
(12) Total,				
(13) Power,				
(14) Power-house fuel, tons,				
(15) Superintendence and engineering,				
(16) Mine office,				
(17)				
(18) Total,				
(19) Total operating expense,				
(20) General expense and fixed charges:				
(21) Royalty,				
(22) Depletion reserve,				
(23) Depreciation reserve,				
(24) Maintenance reserve,				
(25) Contingent reserve,				
(26) Taxes (exclude income and excess profit), %				
(27) Insurance—General,				
(28) Insurance—Liability, or Compensation,				
(29) Officers' salaries and expenses,				
(30) Other general office salaries and expense, %				
(31) Legal,				
(32) Miscellaneous,				
(33)				
(34) Total general expenses and fixed charges,				
(35) Total mine expense,				
II. Selling expense.				
(36) Commissions,				
(37) Advertising,				
(38) Bad accounts,				
(39) Allowances,				
(40) Salesmen's salaries and expenses,				
(41) Officers' salaries and expenses,				
(42) Other office salaries and expenses, %				
(43) Miscellaneous,				
(44)				
(45) Total selling expense,				
III. Other expense.				
(46) Taxes—Income and excess profit,				
(47) Interest,				
(48) Sinking fund,				
(49)				
(50) Total other expense,				
(51) Capital and maintenance reserve charges:				
(52) Improvements,				
(53) Developments,				
(54) Maintenance,				
(55)				
(56) Total capital and maintenance reserve charges,				
(57) Supplies:				
(58) Supplies on hand 1st of month,				
(59) Supplies purchased during month,				
(60) Total,				
(61) Supplies used during month,				
(62) Supplies on hand end of month,				

INCOME.

		Amount.
		$
(63) Coal sales:		
(64) Local sales,	at per ton,	
(65) Shipped,	at per ton,	
(66) Railroad,	at per ton,	
(67) Coke,	at per ton,	
(68) Power-house fuel,	at per ton,	
(69)		
(70) Total sales,		
(71) Cost of sales:		
(72) Total mine expense (Item 35),		
(73) Coal purchased,		
(74) Total,		
(75) Inventory 1st of month,		
(76) Inventory end of month,		
(77) Increase or decrease in inventories,		
(78) Total costs (Add 74 and 77),		
(79) Gross profit on coal sold (Subtract 78 from 70),		
(80) Miscellaneous profits:		
(81) Powder,		
(82) Interest on pay roll advanced,		
(83) Smithing,		
(84) Heat, light, and power,		
(85) Dwellings and farms,		
(86) Stores,		
(87) Standard-gauge railroad equipment,		
(88) Floating equipment,		
(89) Coke and by-products,		
(90) Other income,		
(91)		
(92) Total gross profit,		
(93) Selling expense,		
(94) Other expense,		
(95) Total,		
(96) Total net income,		

Coal tonnage. (2,000 pounds.)

	Prepared.	Run-of-mine.	Slack.	Total.
(97) Sales:				
(98) Local,				
(99) Shipped,				
(100) Railroad,				
(101) Coke,				
(102) Power-house fuel,				
(103) Total sales,				
(104) Add				
(105) Inventory, end of month,				
(106) Total,				
(107) Deduct				
(108) Inventory 1st of month,				
(109) Purchased coal,				
(110) Total deductions,				
(111) Production,				

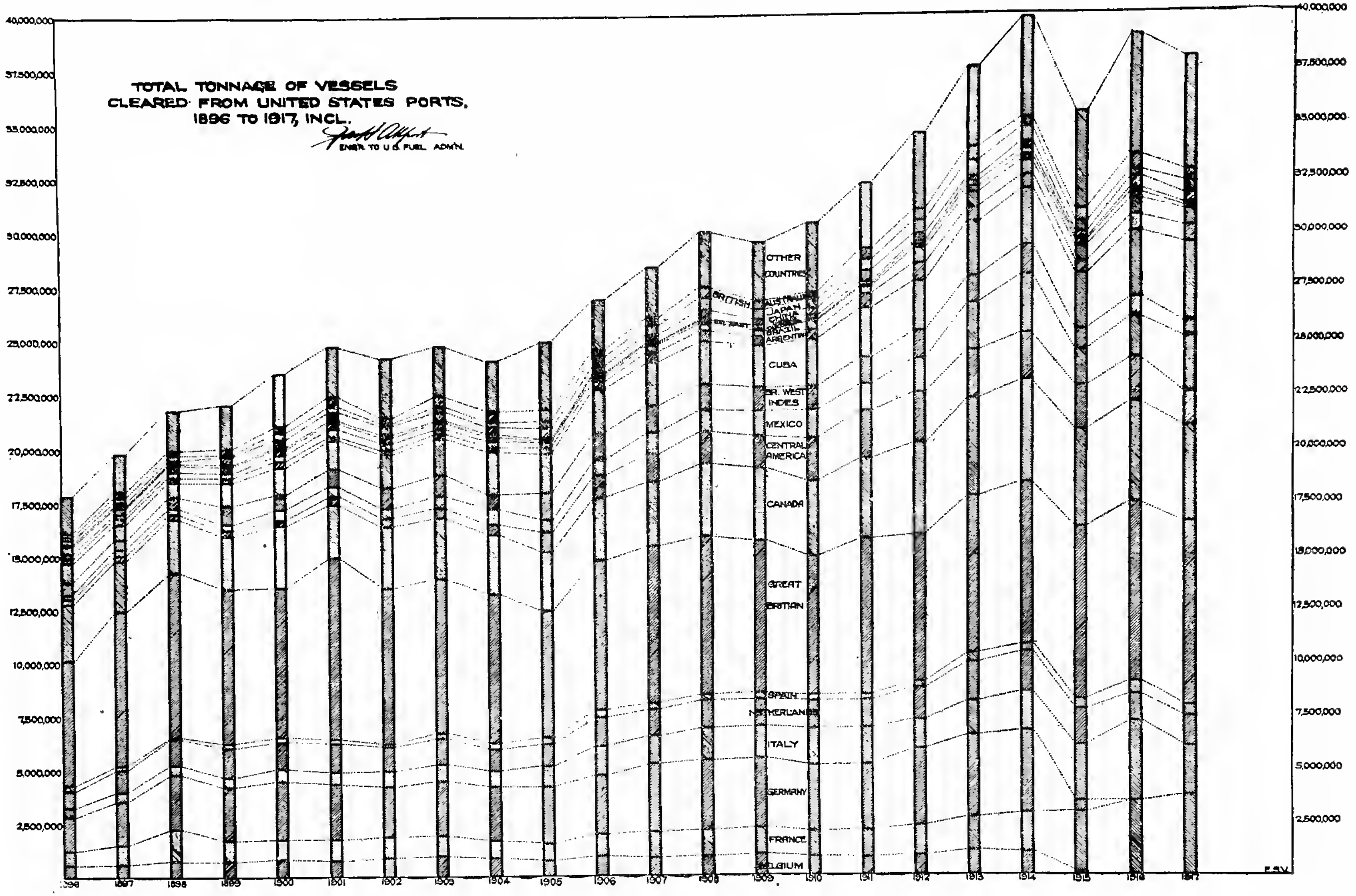
(112) Kind of coal,
(113) Name or number of seam,
(114) Thickness of seam,
(115) Number of mines,
(116) Remarks:

Number days worked,
Cause of idle days,

Approved and certified correct: ...., ...
(Name.) (Title.)

This report must be signed by an officer of the company.

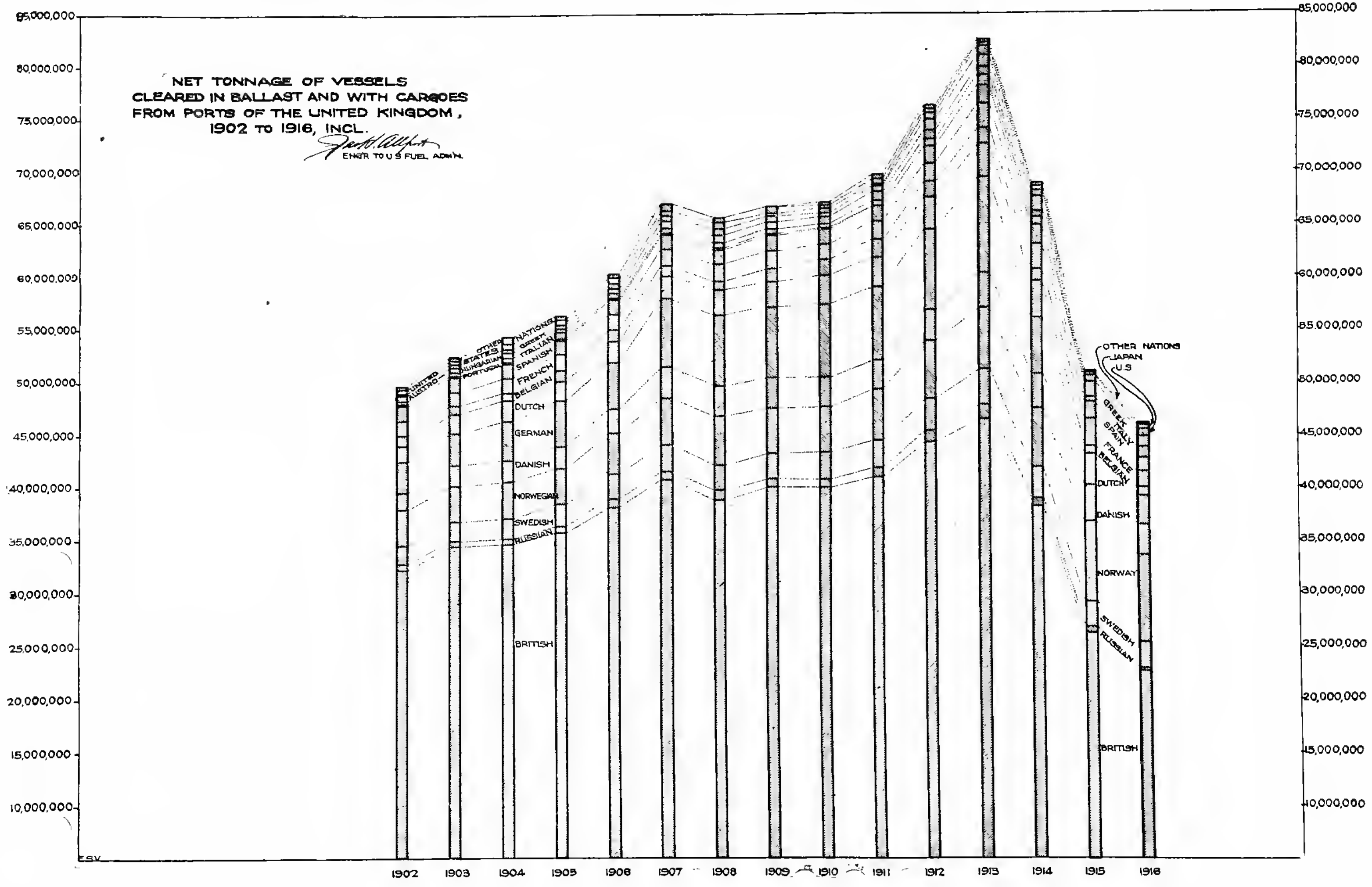
Exp. 1



TOTAL TONNAGE OF VESSELS CLEARED FROM UNITED STATES PORTS, 1896 TO 1917, INCL.

ENGR. TO U.S. FUEL ADM'N.

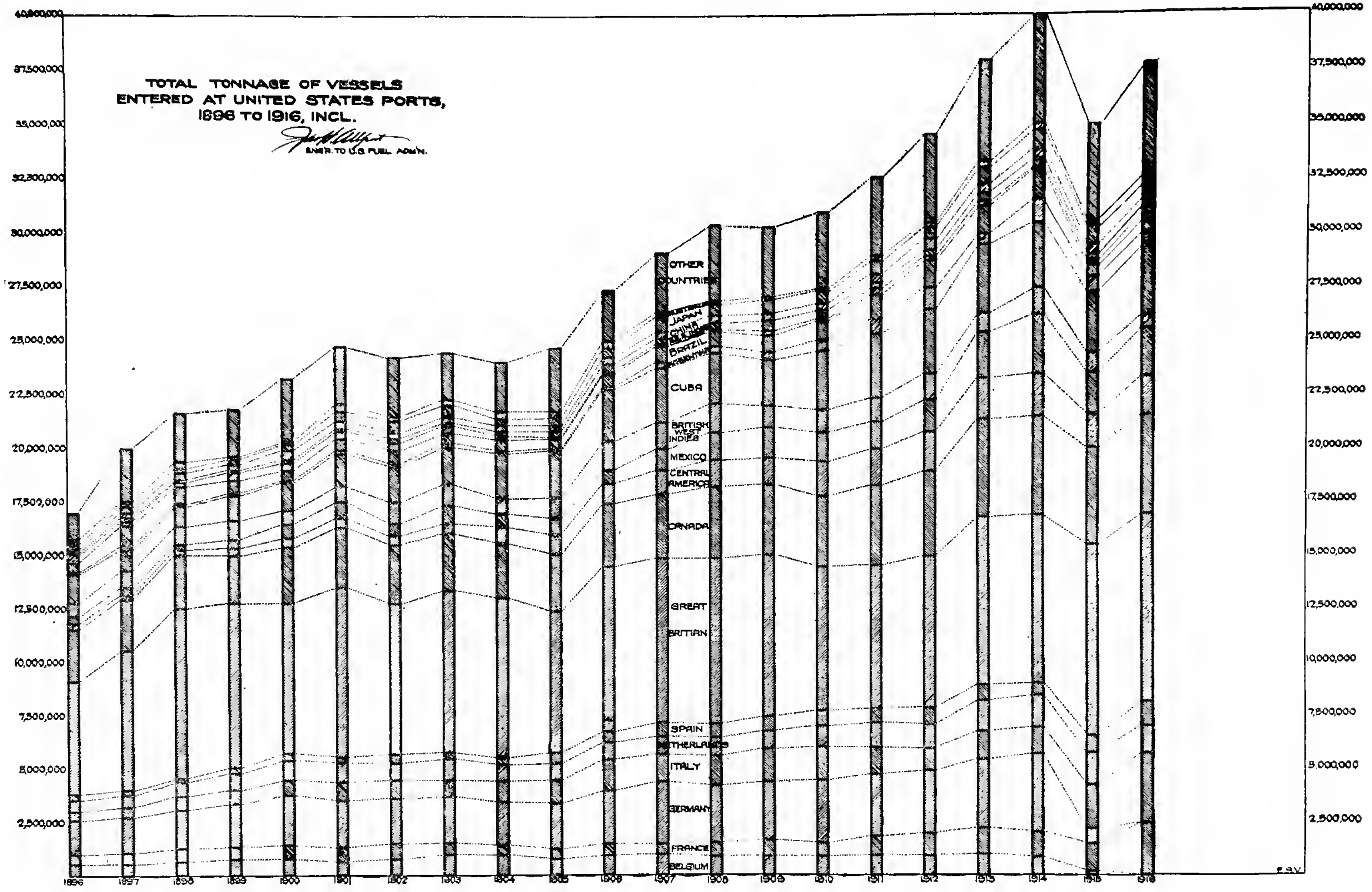
EXP. 2



NET TONNAGE OF VESSELS
CLEARED IN BALLAST AND WITH CARGOES
FROM PORTS OF THE UNITED KINGDOM,
1902 TO 1916, INCL.

ENGR TO U S FUEL ADM'N.

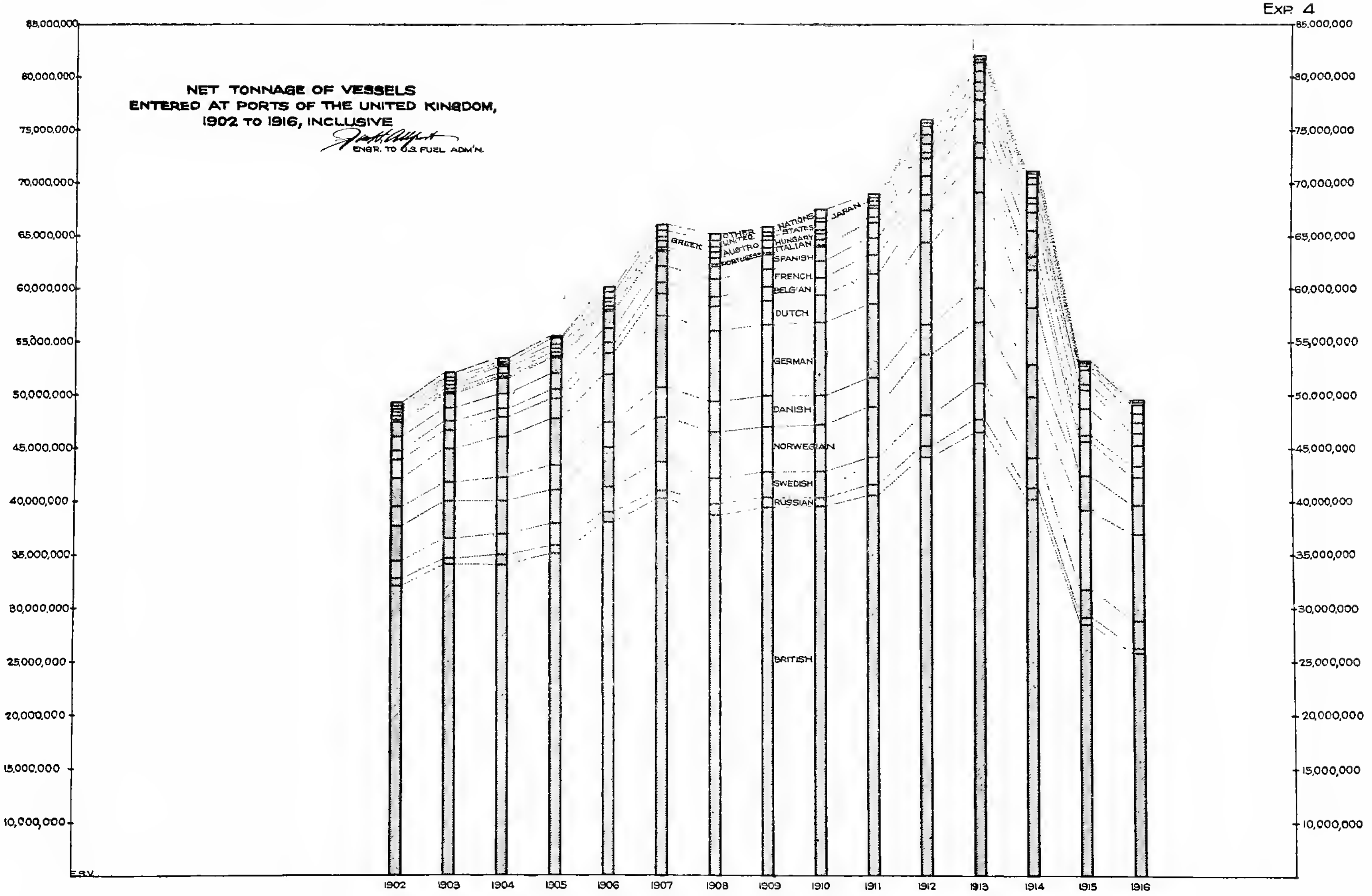
EXP. 3



TOTAL TONNAGE OF VESSELS ENTERED AT UNITED STATES PORTS, 1896 TO 1916, INCL.

ENGR. TO U.S. FUEL ADM'N.

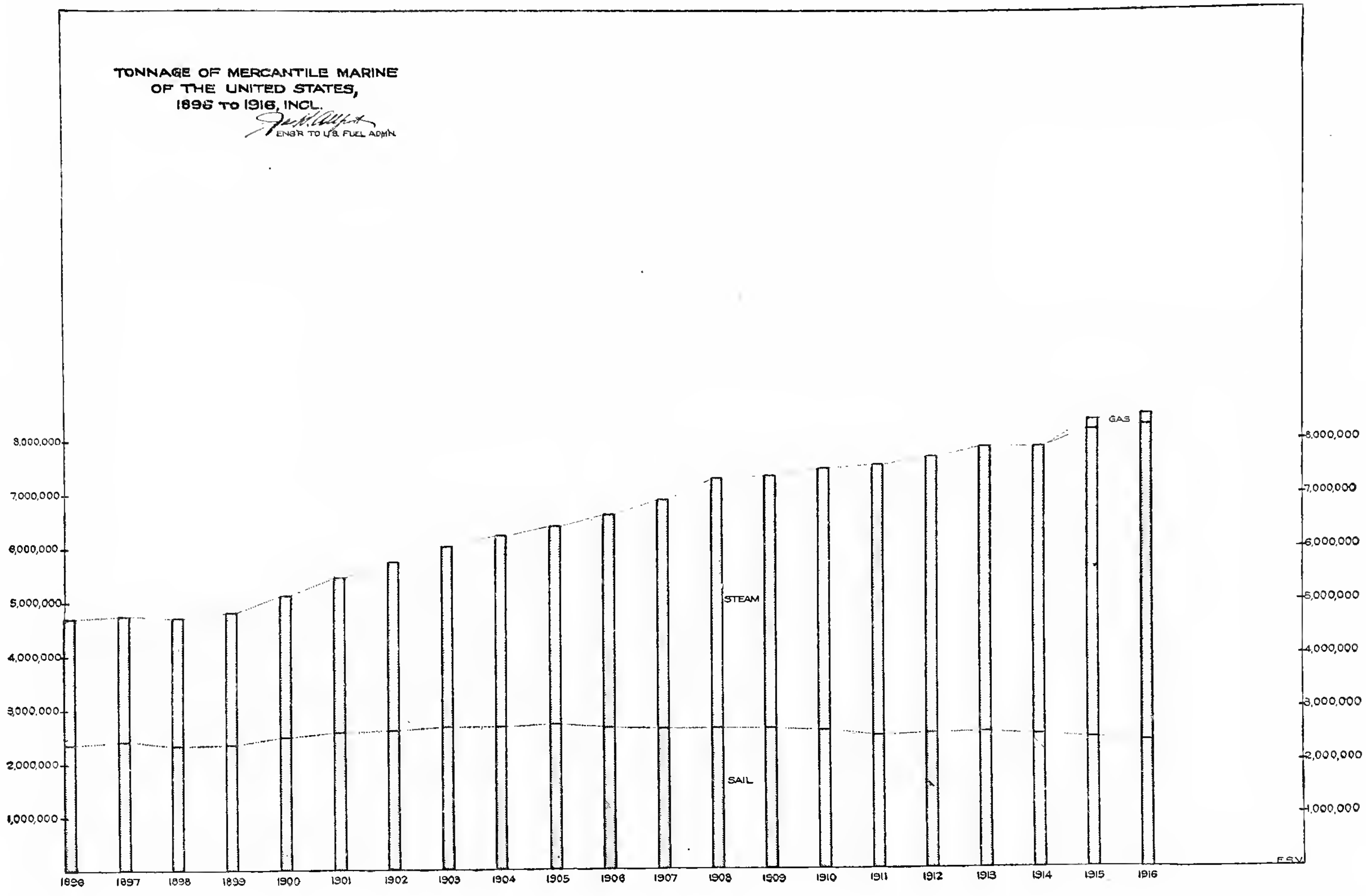
Exp 4



NET TONNAGE OF VESSELS
ENTERED AT PORTS OF THE UNITED KINGDOM,
1902 TO 1916, INCLUSIVE

ENGR. TO U.S. FUEL ADM'N.

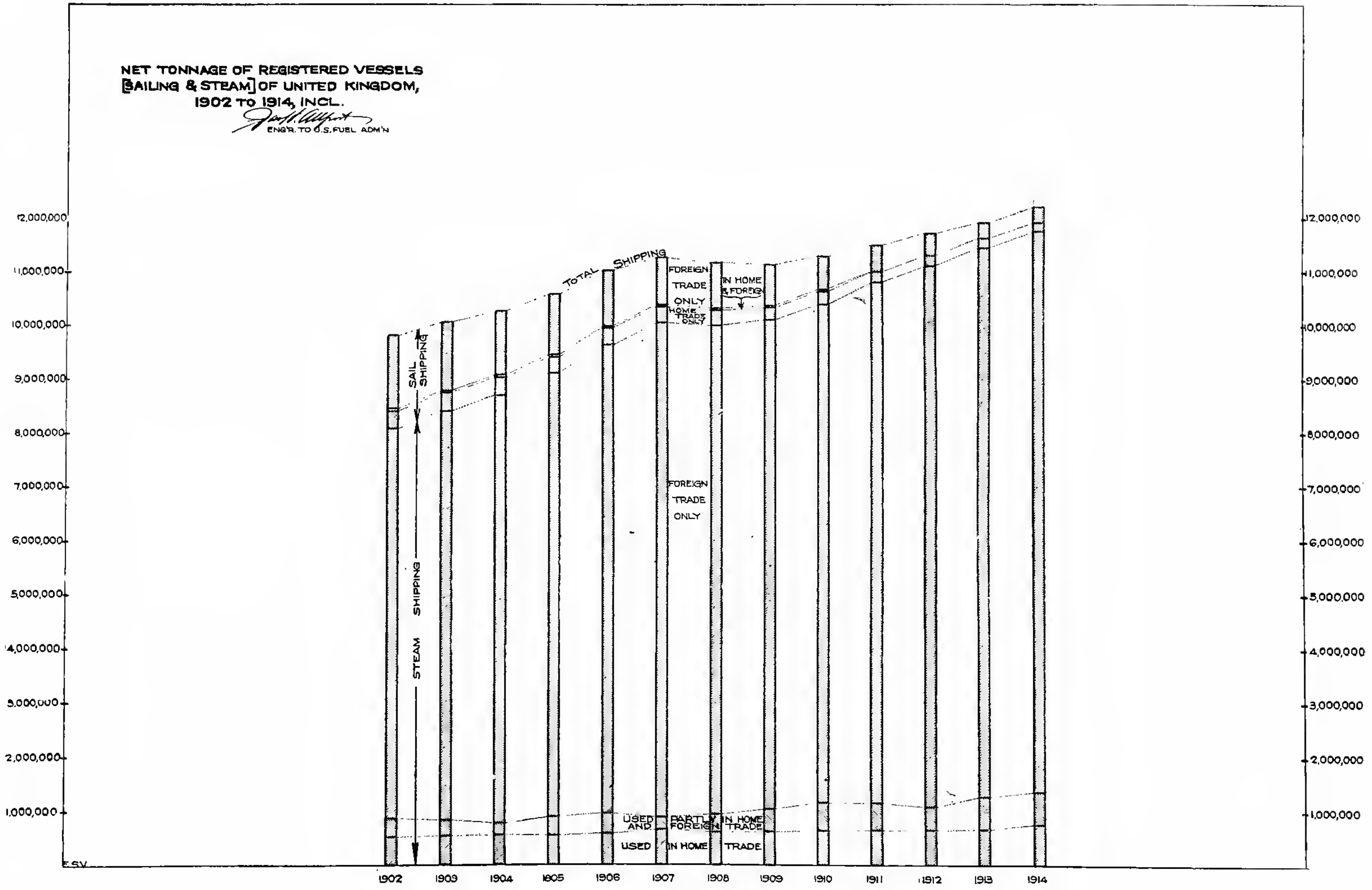
EXP. 5



TONNAGE OF MERCANTILE MARINE
OF THE UNITED STATES,
1896 TO 1916, INCL.

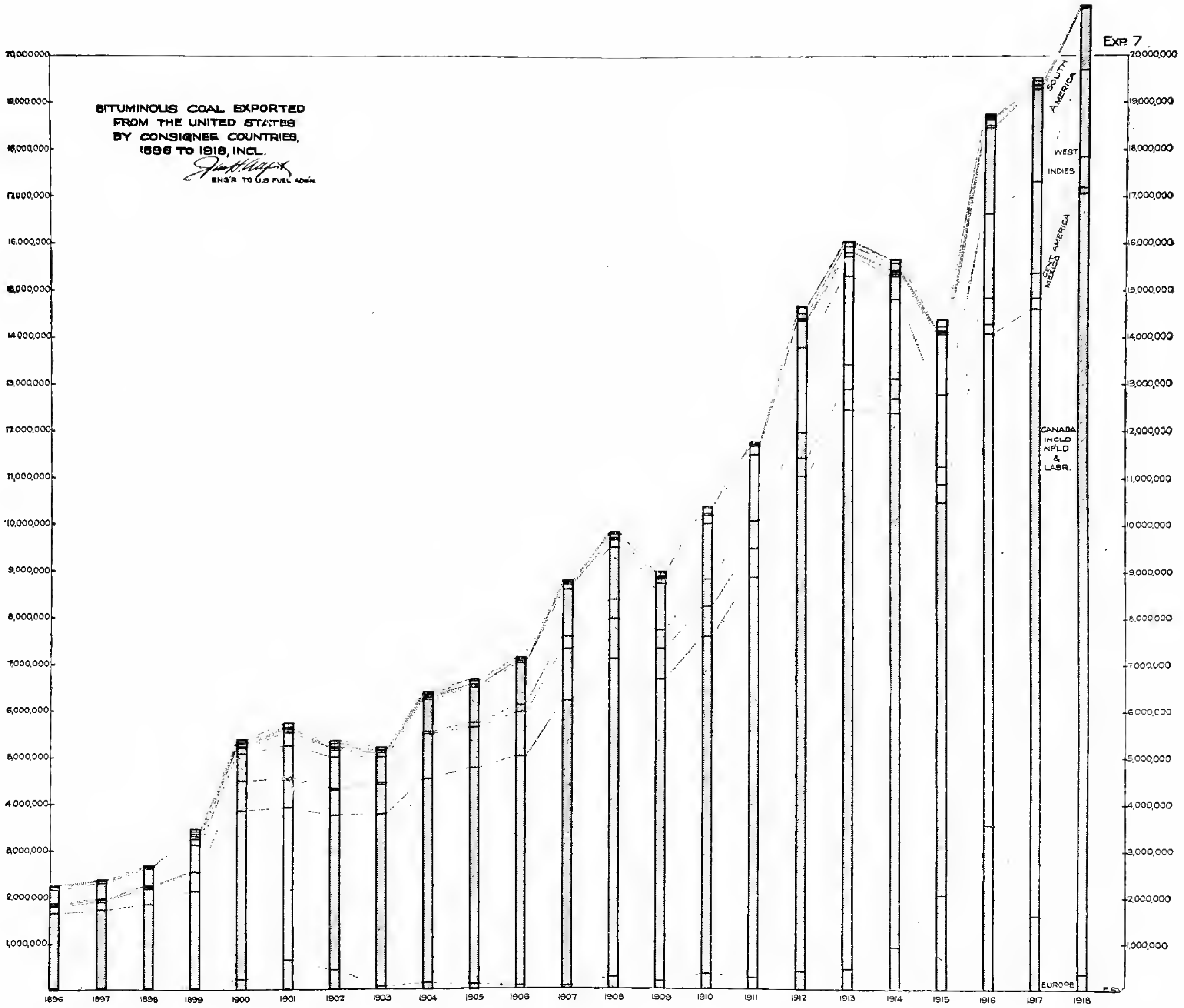
ENG'R TO U.S. FUEL ADM'N.

Exp. 6



NET TONNAGE OF REGISTERED VESSELS
[SAILING & STEAM] OF UNITED KINGDOM,
1902 TO 1914, INCL.

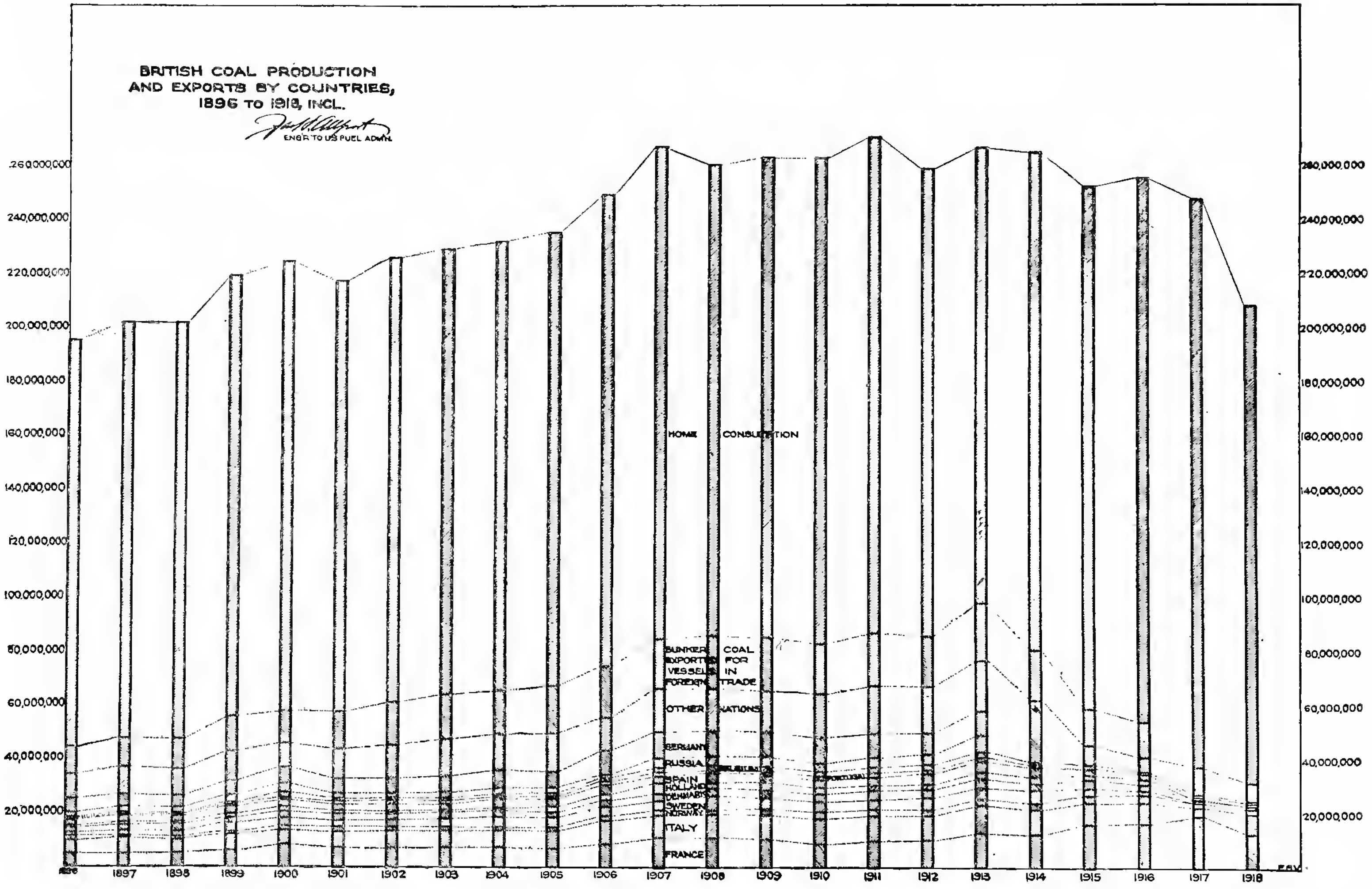
ENG'R. TO U.S. FUEL ADM'N



BITUMINOUS COAL EXPORTED FROM THE UNITED STATES BY CONSIGNEE COUNTRIES, 1896 TO 1918, INCL.

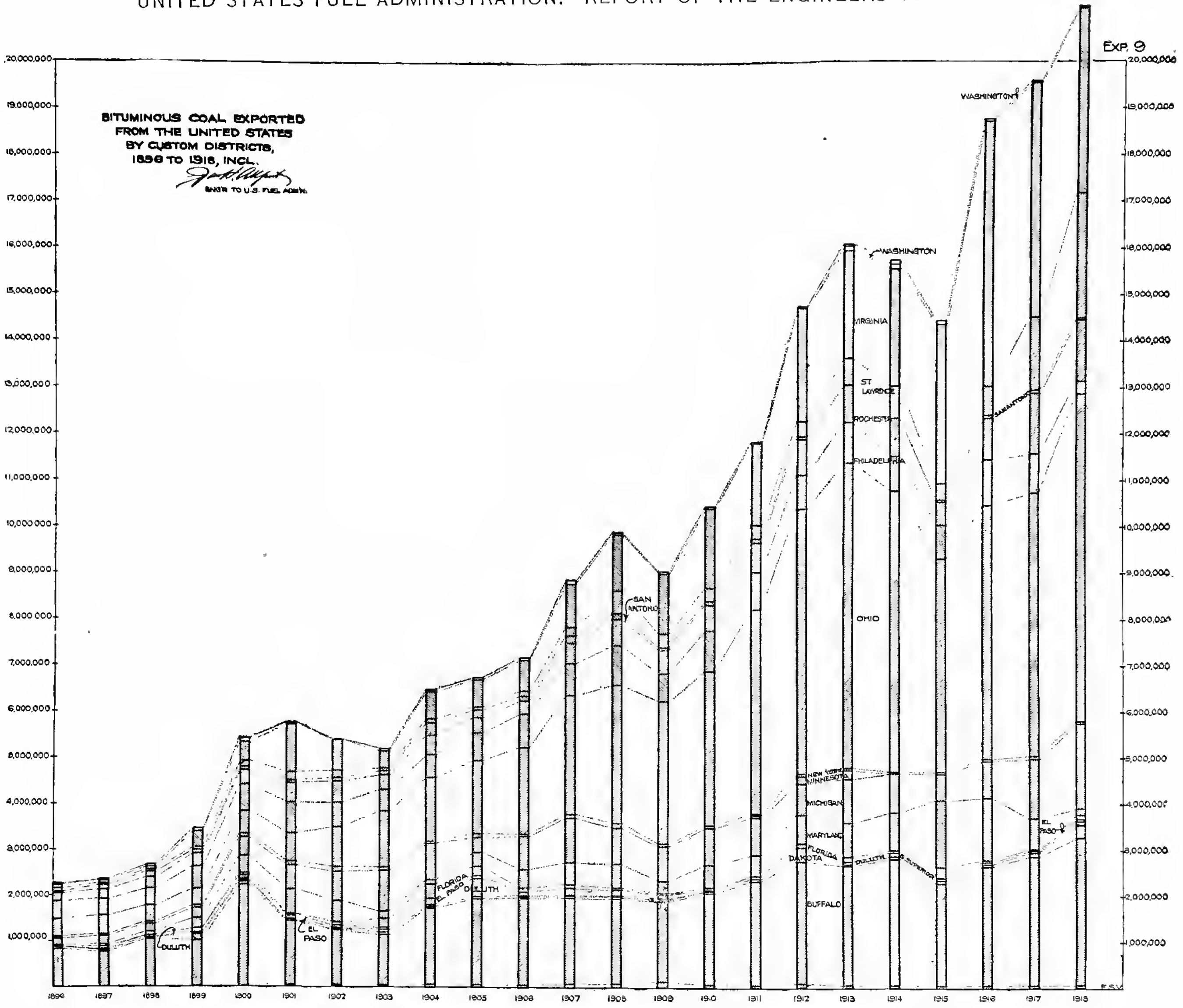
ENG'R TO U.S. FUEL ADM'N

Exp. 8



BRITISH COAL PRODUCTION AND EXPORTS BY COUNTRIES, 1896 TO 1918, INCL.

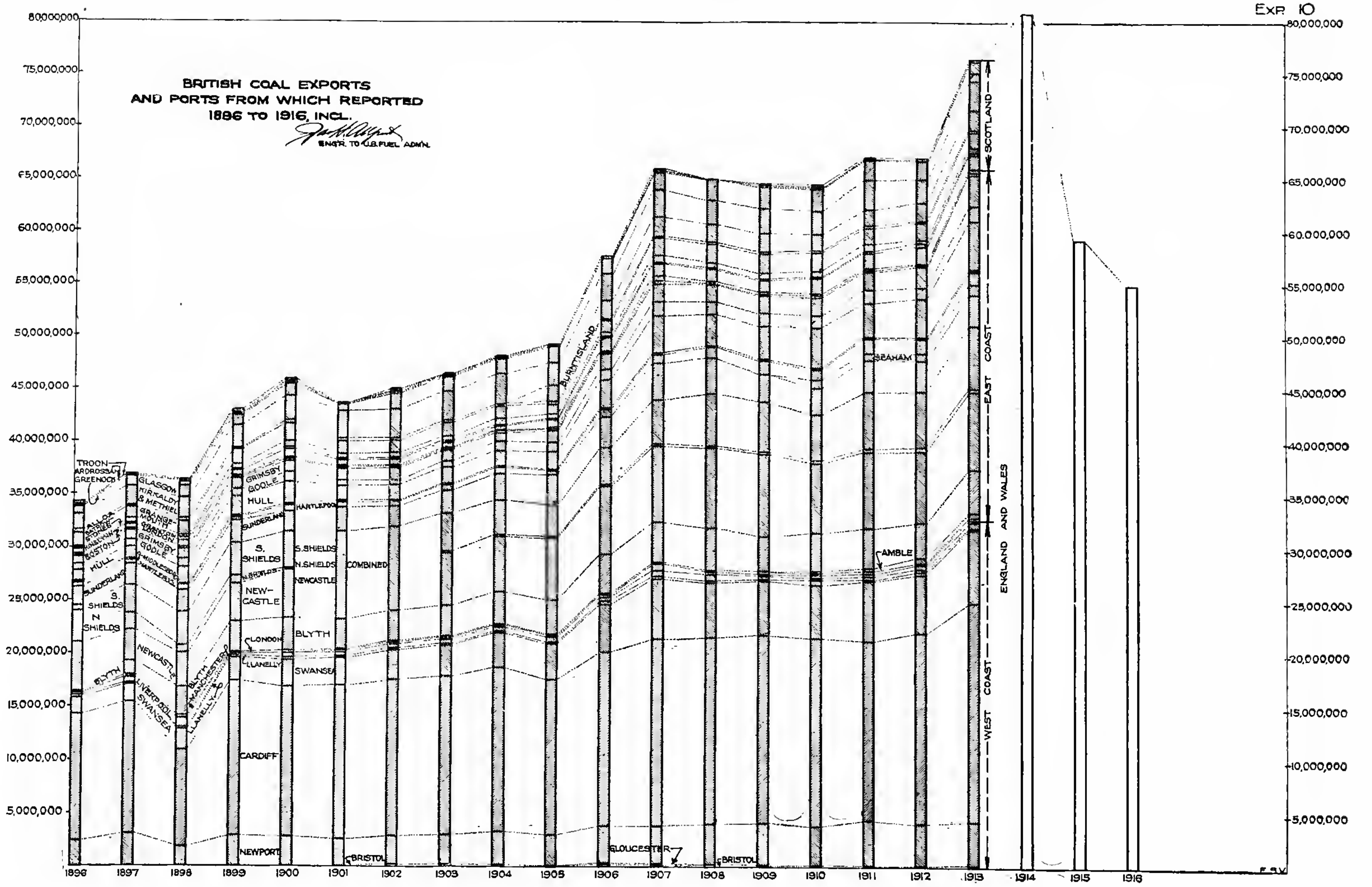
ENG'R TO U.S. FUEL ADM'N.



BITUMINOUS COAL EXPORTED
FROM THE UNITED STATES
BY CUSTOM DISTRICTS,
1898 TO 1918, INCL.

ENG'R TO U.S. FUEL ADM'N.

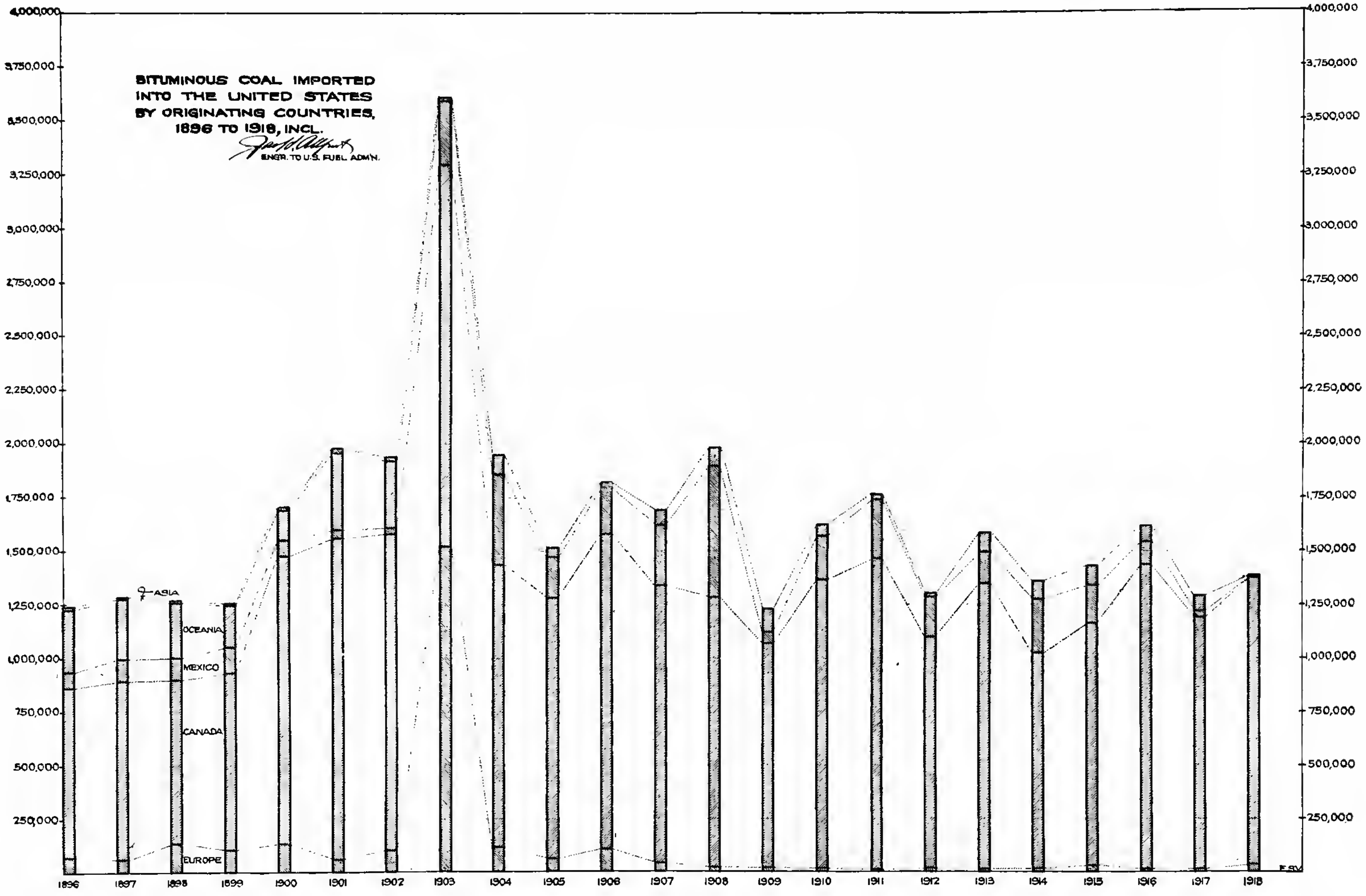
Exp. 10



BRITISH COAL EXPORTS AND PORTS FROM WHICH REPORTED 1886 TO 1916, INCL.

ENGR. TO U.S. FUEL ADM'N.

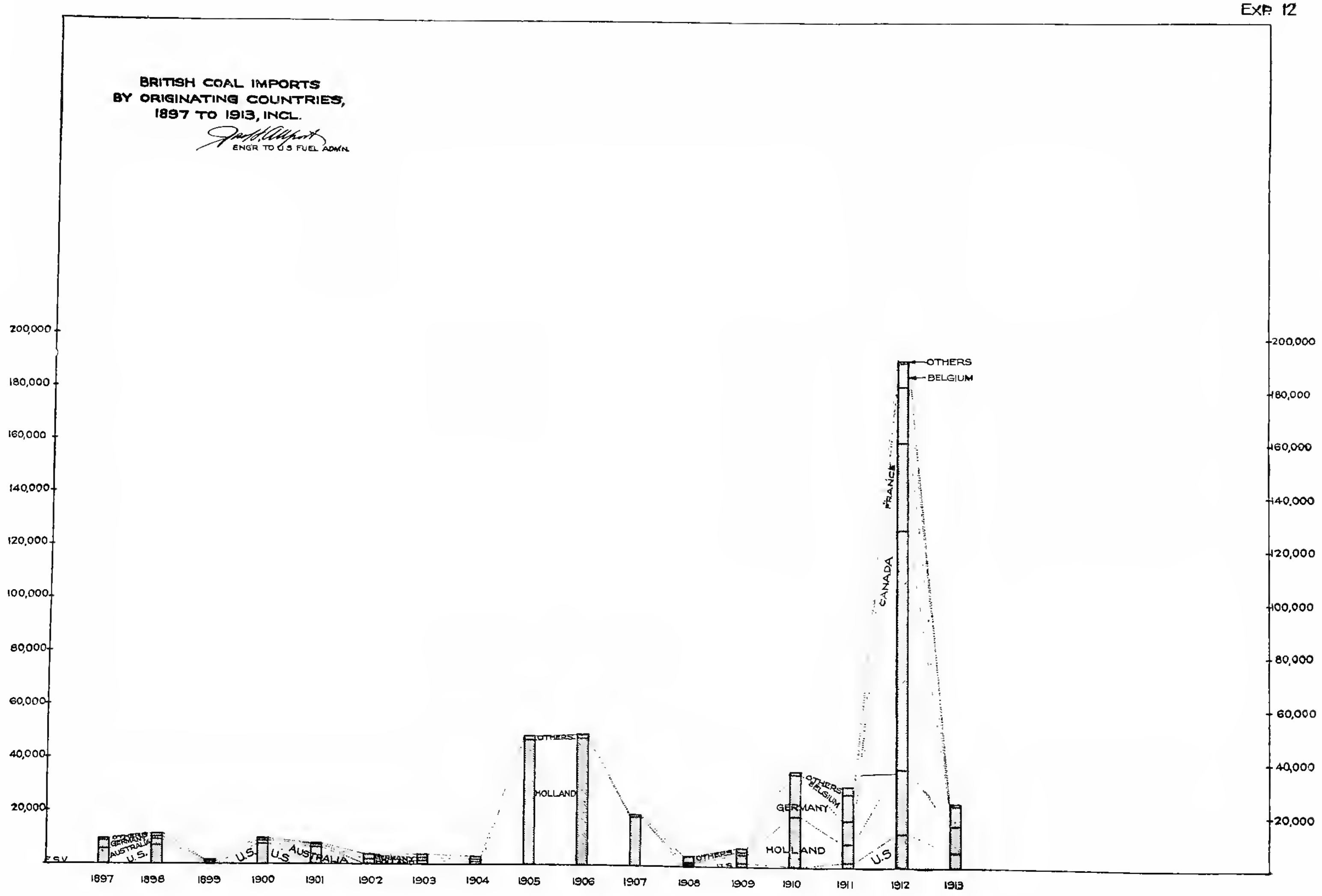
Exh 11



BITUMINOUS COAL IMPORTED INTO THE UNITED STATES BY ORIGINATING COUNTRIES, 1896 TO 1918, INCL.

ENGR. TO U.S. FUEL ADM'N.

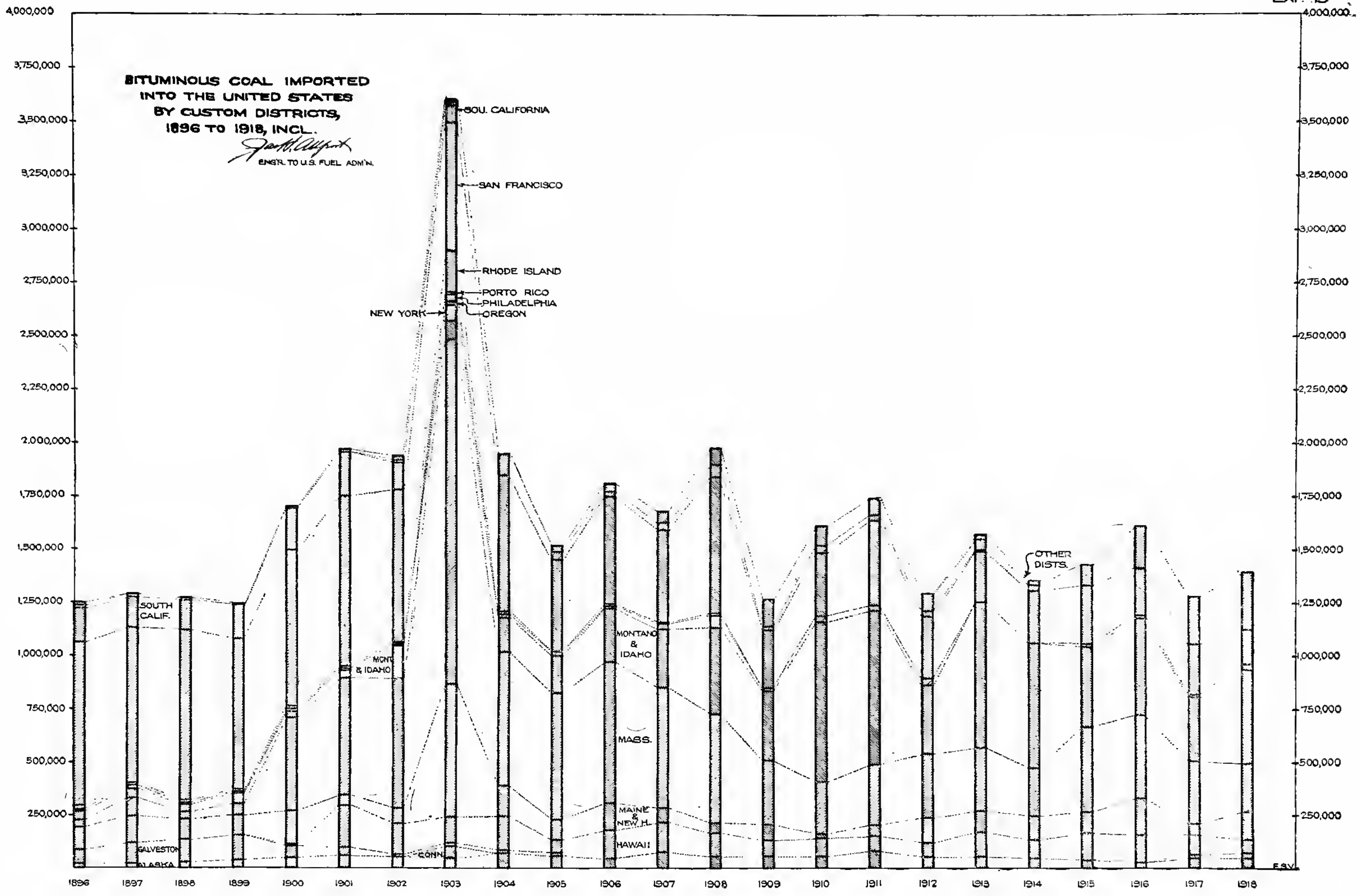
Exp 12



BRITISH COAL IMPORTS BY ORIGINATING COUNTRIES, 1897 TO 1913, INCL.

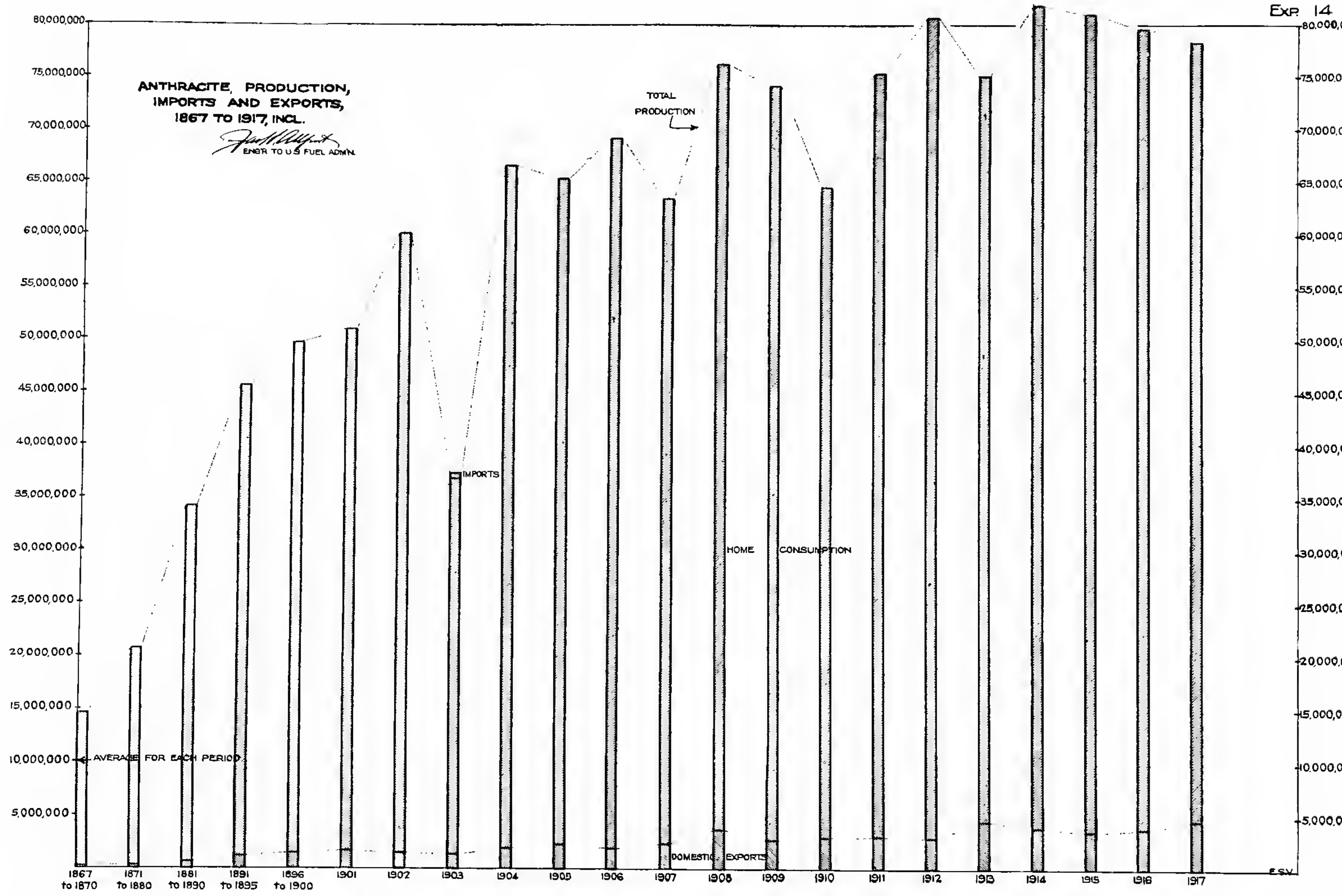
ENGR TO U S FUEL ADMN.

EXP. 13

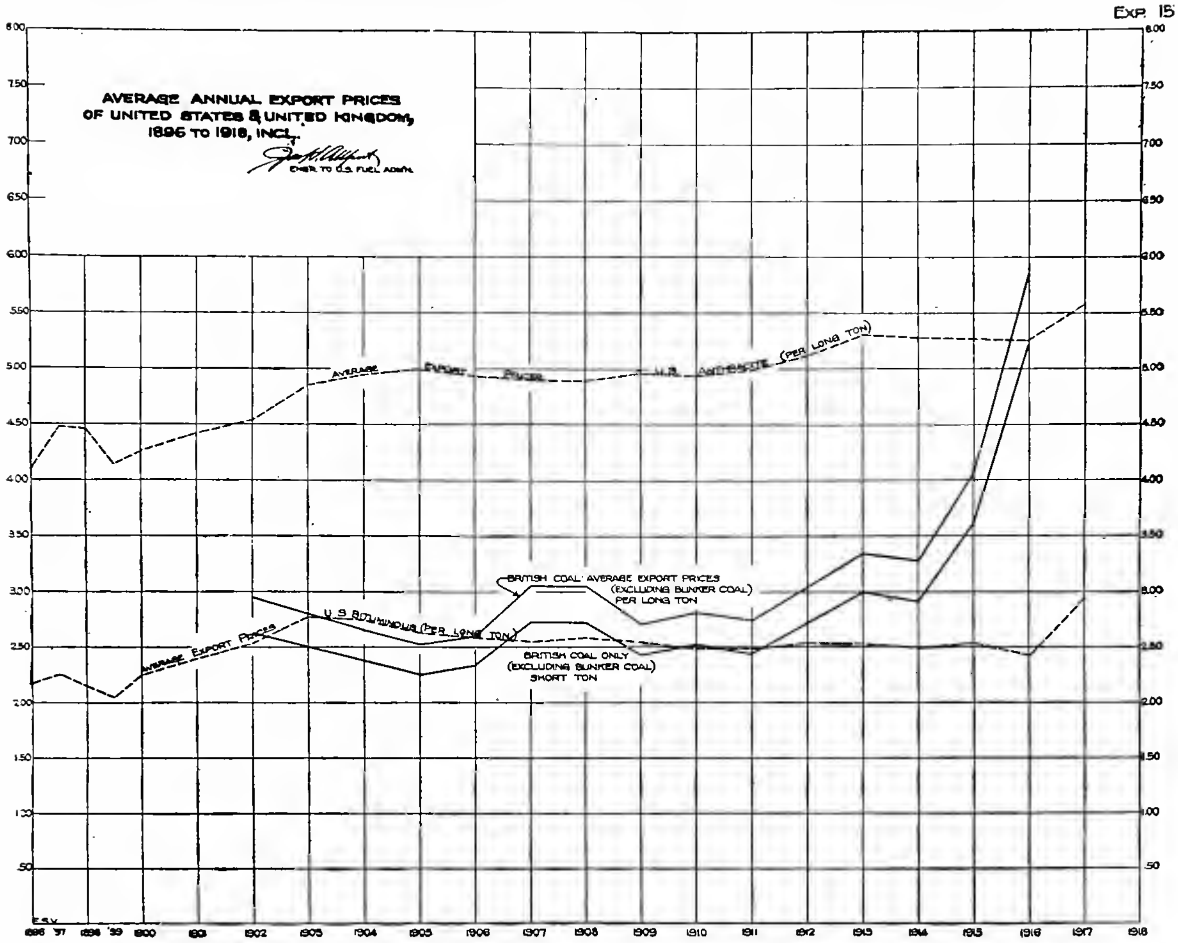


BITUMINOUS COAL IMPORTED INTO THE UNITED STATES BY CUSTOM DISTRICTS, 1896 TO 1918, INCL.

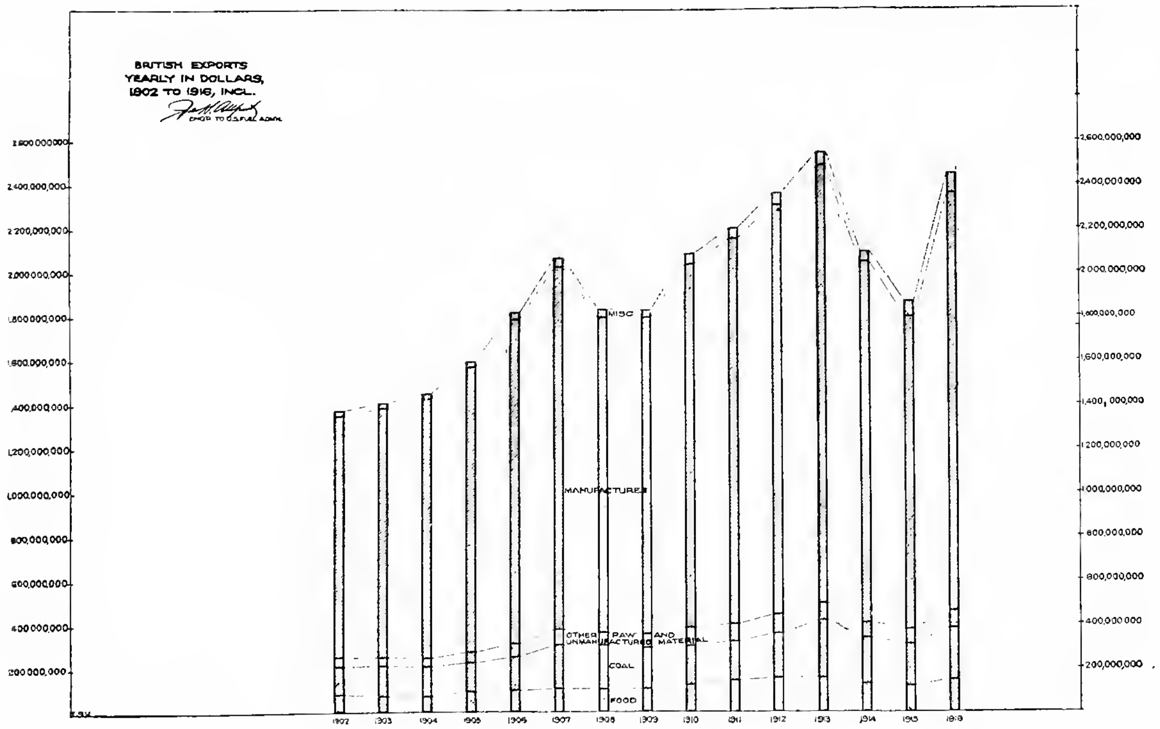
ENGR. TO U.S. FUEL ADM'N.


Exp. 14
ANTHRACITE, PRODUCTION, IMPORTS AND EXPORTS, 1867 TO 1917, INCL.
ENGR TO U.S. FUEL ADMN.
TOTAL PRODUCTION
HOME CONSUMPTION
IMPORTS
DOMESTIC EXPORTS
AVERAGE FOR EACH PERIOD
80,000,000
75,000,000
70,000,000
65,000,000
60,000,000
55,000,000
50,000,000
45,000,000
40,000,000
35,000,000
30,000,000
25,000,000
20,000,000
15,000,000
10,000,000
5,000,000
1867 to 1870
1871 to 1880
1881 to 1890
1891 to 1895
1896 to 1900
1901
1902
1903
1904
1905
1906
1907
1908
1909
1910
1911
1912
1913
1914
1915
1916
1917
E.S.V.

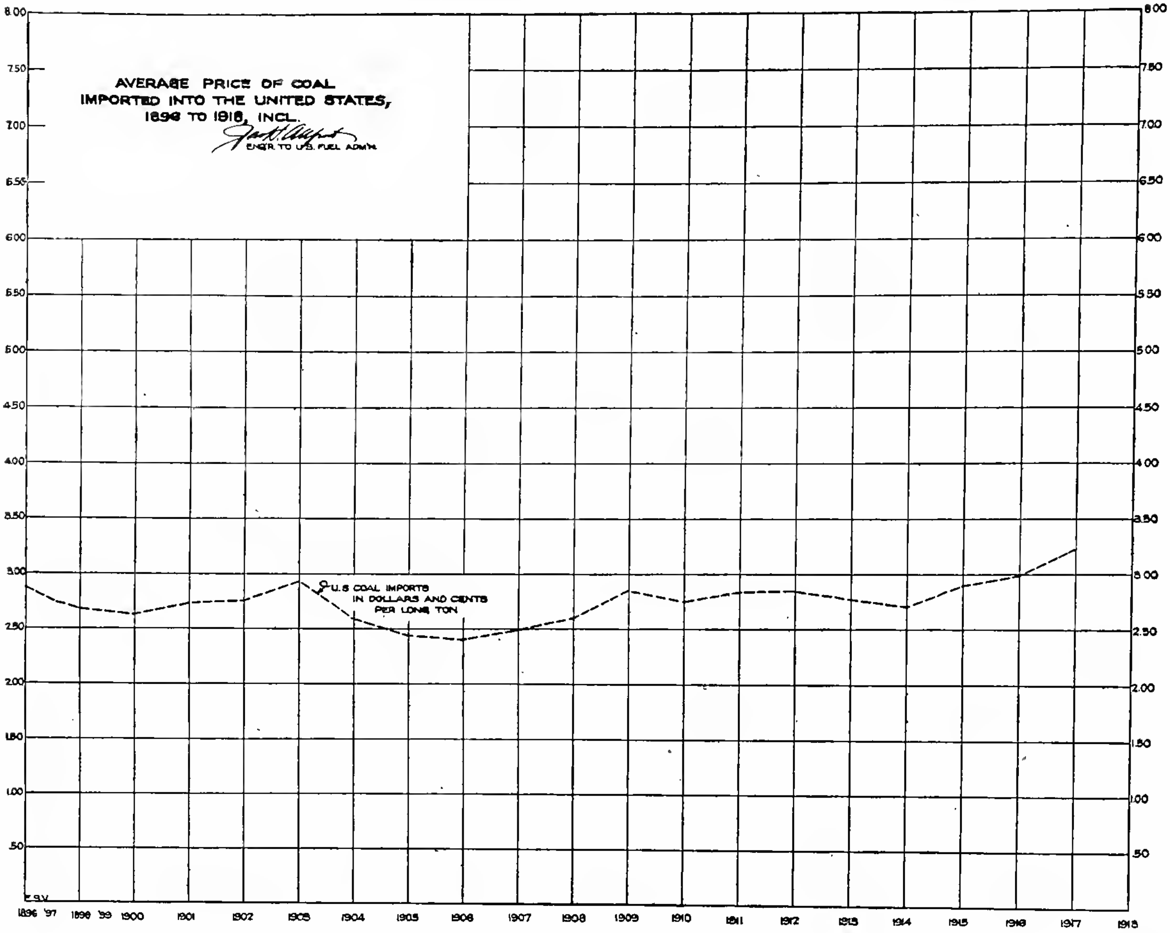
Exp. 15


AVERAGE ANNUAL EXPORT PRICES
OF UNITED STATES & UNITED KINGDOM,
1896 TO 1918, INCL.
ENGR. TO U.S. FUEL ADM'N.
AVERAGE EXPORT PRICES U.S. ANTHRACITE (PER LONG TON)
AVERAGE EXPORT PRICES
U.S. BITUMINOUS (PER LONG TON)
BRITISH COAL AVERAGE EXPORT PRICES
(EXCLUDING BUNKER COAL)
PER LONG TON
BRITISH COAL ONLY
(EXCLUDING BUNKER COAL)
SHORT TON
8.00
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
.50
E.S.V.
1896
'97
1898
'99
1900
1901
1902
1903
1904
1905
1906
1907
1908
1909
1910
1911
1912
1913
1914
1915
1916
1917
1918

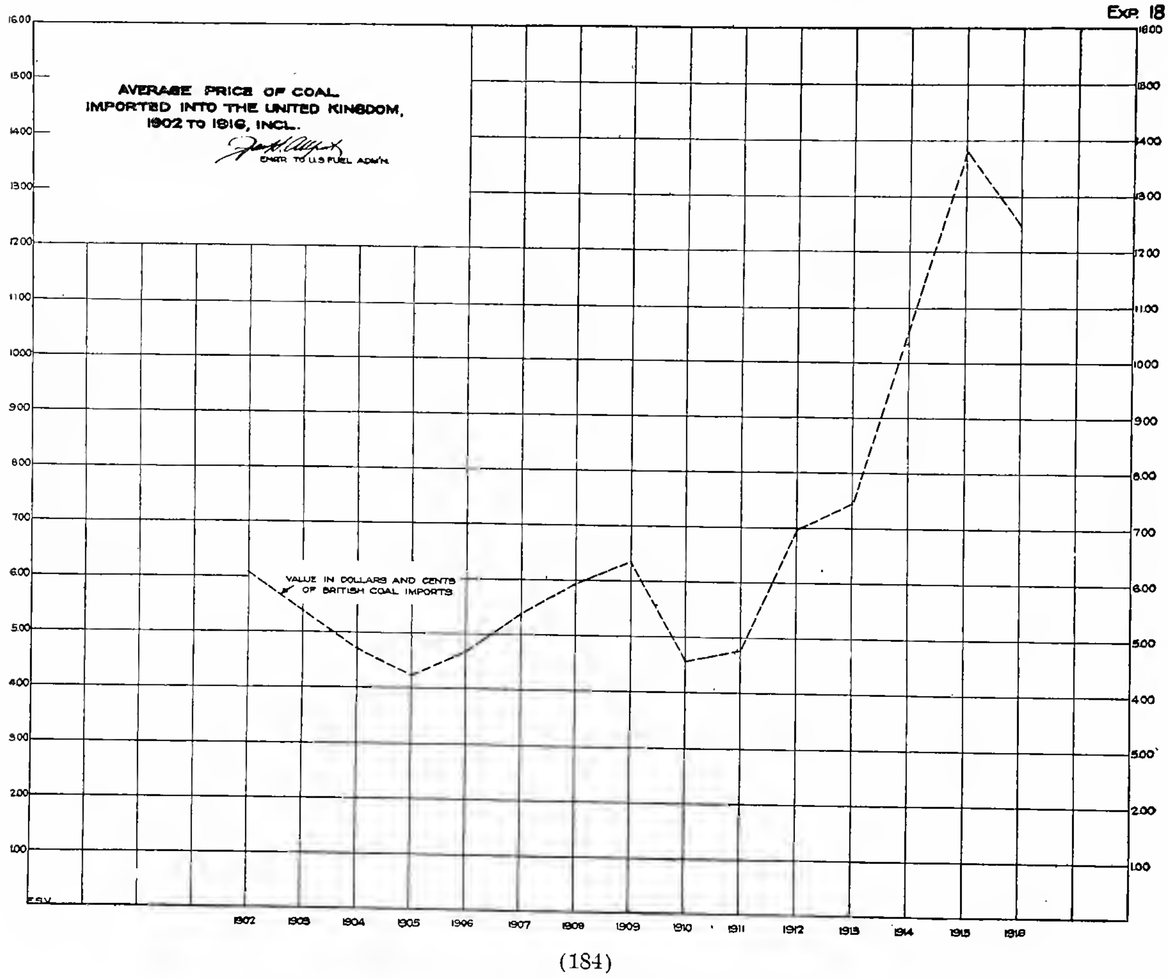
Exp. 16


BRITISH EXPORTS
YEARLY IN DOLLARS,
1902 TO 1916, INCL.
ENGR. TO U.S. FUEL ADM'N.
MISC.
MANUFACTURES
OTHER RAW AND
UNMANUFACTURED MATERIAL
COAL
FOOD
2,600,000,000
2,400,000,000
2,200,000,000
2,000,000,000
1,800,000,000
1,600,000,000
1,400,000,000
1,200,000,000
1,000,000,000
800,000,000
600,000,000
400,000,000
200,000,000
E.S.V.
1902
1903
1904
1905
1906
1907
1908
1909
1910
1911
1912
1913
1914
1915
1916

Exp 17

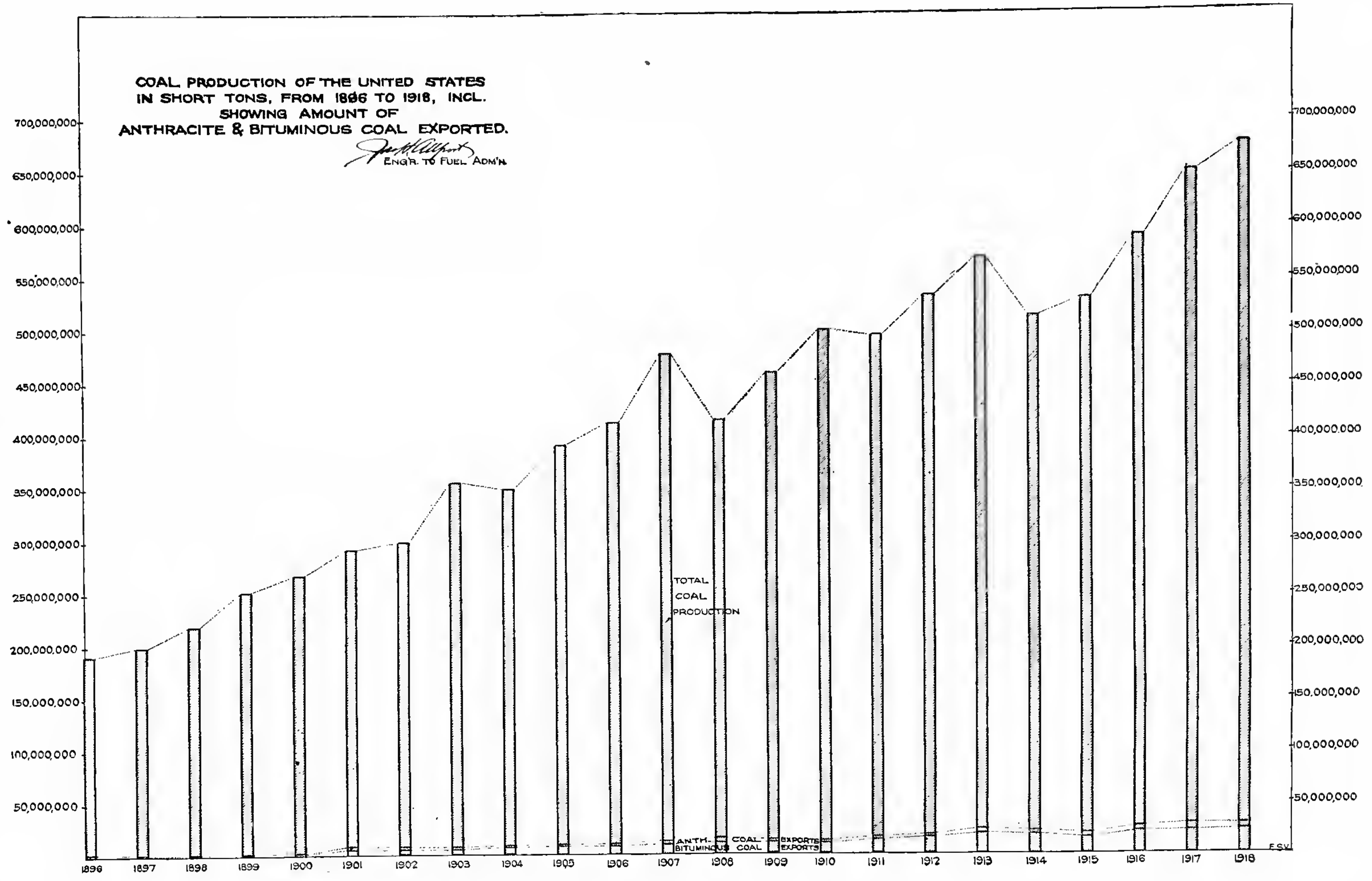

AVERAGE PRICE OF COAL
IMPORTED INTO THE UNITED STATES,
1896 TO 1916, INCL.
ENGR TO U.S. FUEL ADM'N.
U.S. COAL IMPORTS
IN DOLLARS AND CENTS
PER LONG TON
8.00
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
.50
E.S.V.
1896 '97
1898 '99
1900
1901
1902
1903
1904
1905
1906
1907
1908
1909
1910
1911
1912
1913
1914
1915
1916
1917
1918

Exp. 18


AVERAGE PRICE OF COAL
IMPORTED INTO THE UNITED KINGDOM,
1902 TO 1916, INCL.
ENGR TO U.S. FUEL ADM'N.
VALUE IN DOLLARS AND CENTS
OF BRITISH COAL IMPORTS
16.00
15.00
14.00
13.00
12.00
11.00
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
E.S.V.
1902
1903
1904
1905
1906
1907
1908
1909
1910
1911
1912
1913
1914
1915
1916

UNITED STATES FUEL ADMINISTRATION. REPORT OF THE ENGINEERS COMMITTEE.

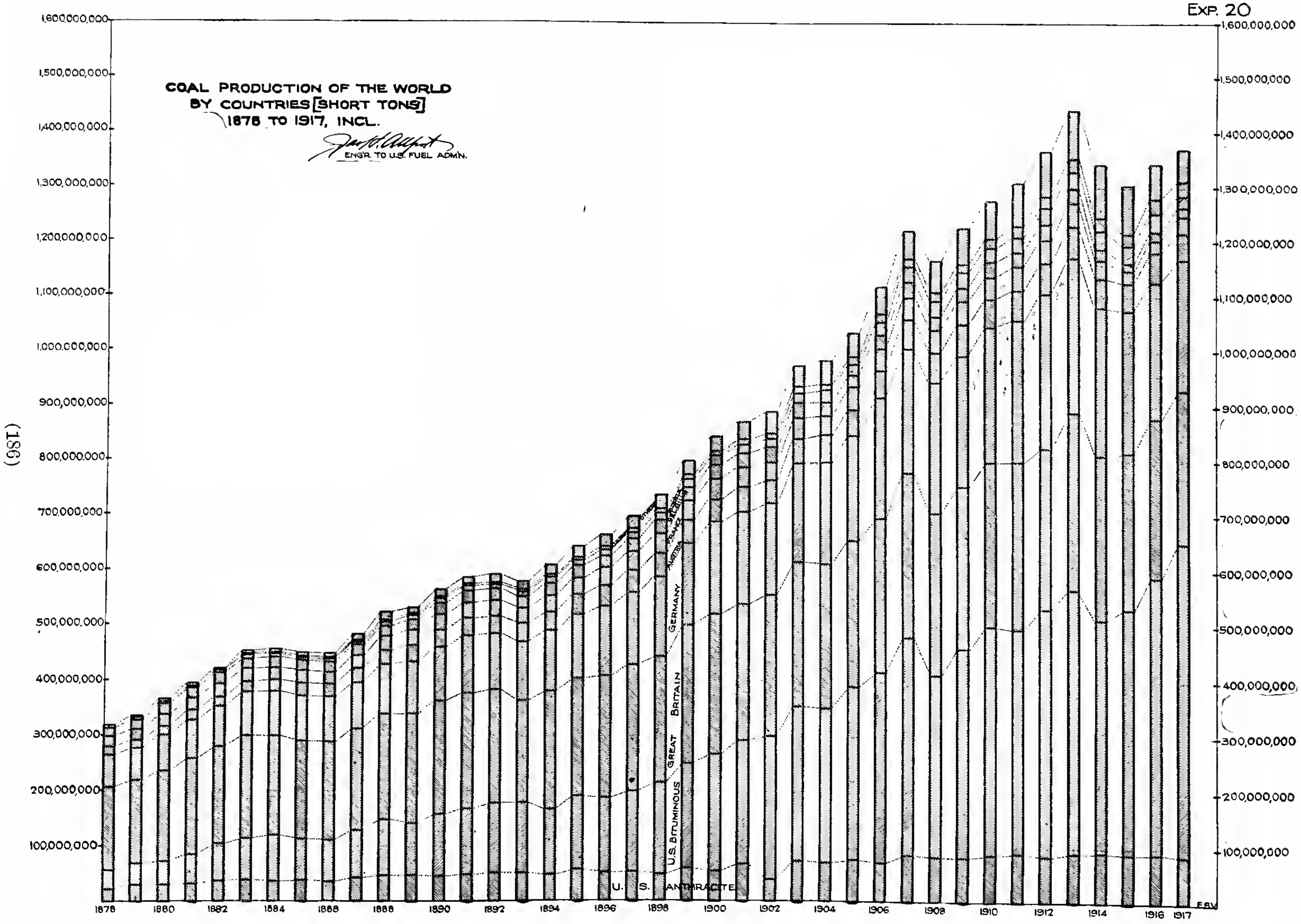
EXP. 19



COAL PRODUCTION OF THE UNITED STATES IN SHORT TONS, FROM 1896 TO 1918, INCL. SHOWING AMOUNT OF ANTHRACITE & BITUMINOUS COAL EXPORTED.

ENG'R. TO FUEL ADM'N.

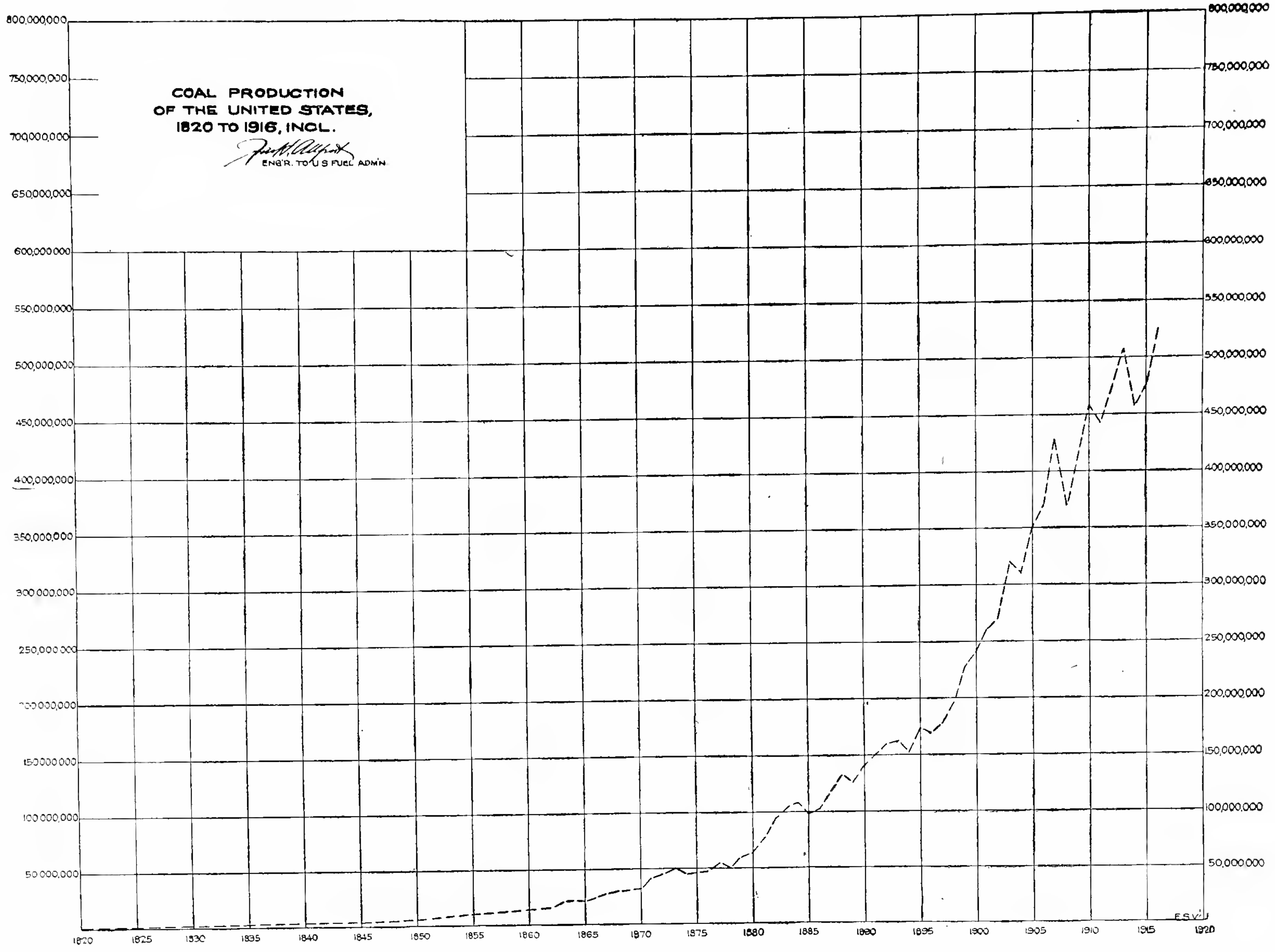
Exp. 20



COAL PRODUCTION OF THE WORLD BY COUNTRIES [SHORT TONS] 1878 TO 1917, INCL.

ENGR. TO U.S. FUEL ADMN.

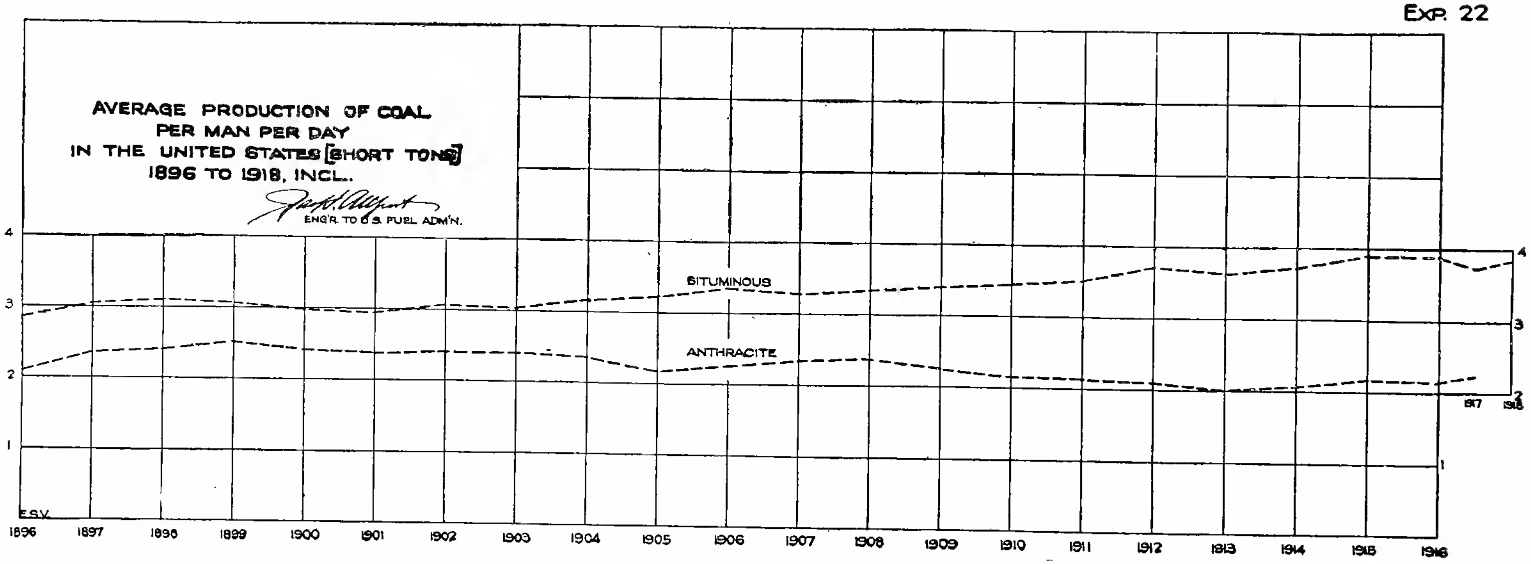
Exp. 21



COAL PRODUCTION OF THE UNITED STATES, 1820 TO 1916, INCL.

ENG'R. TO U S FUEL ADM'N

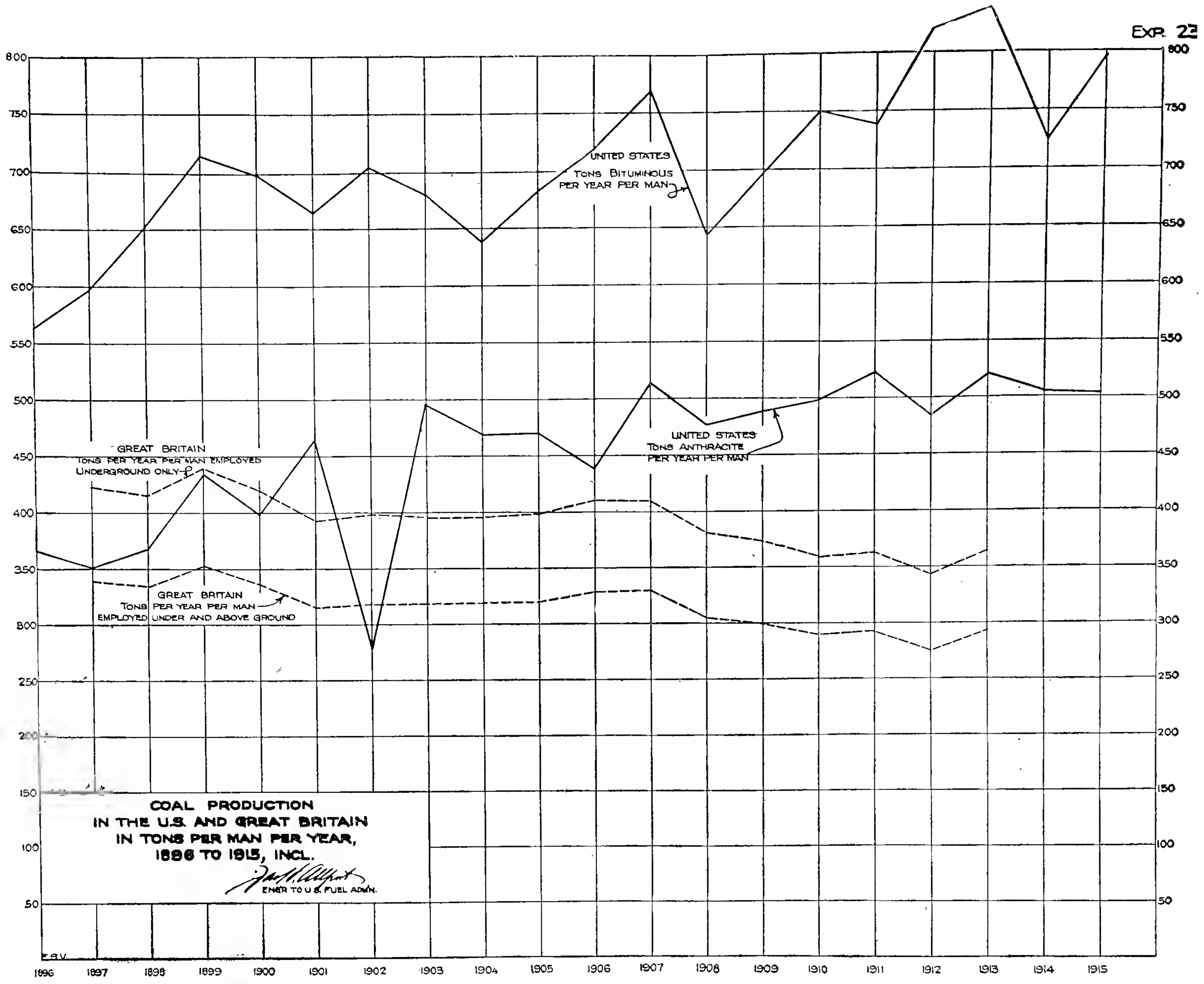
EXP. 22



AVERAGE PRODUCTION OF COAL
PER MAN PER DAY
IN THE UNITED STATES [SHORT TONS]
1896 TO 1918, INCL.

ENG'R. TO U.S. FUEL ADM'N.

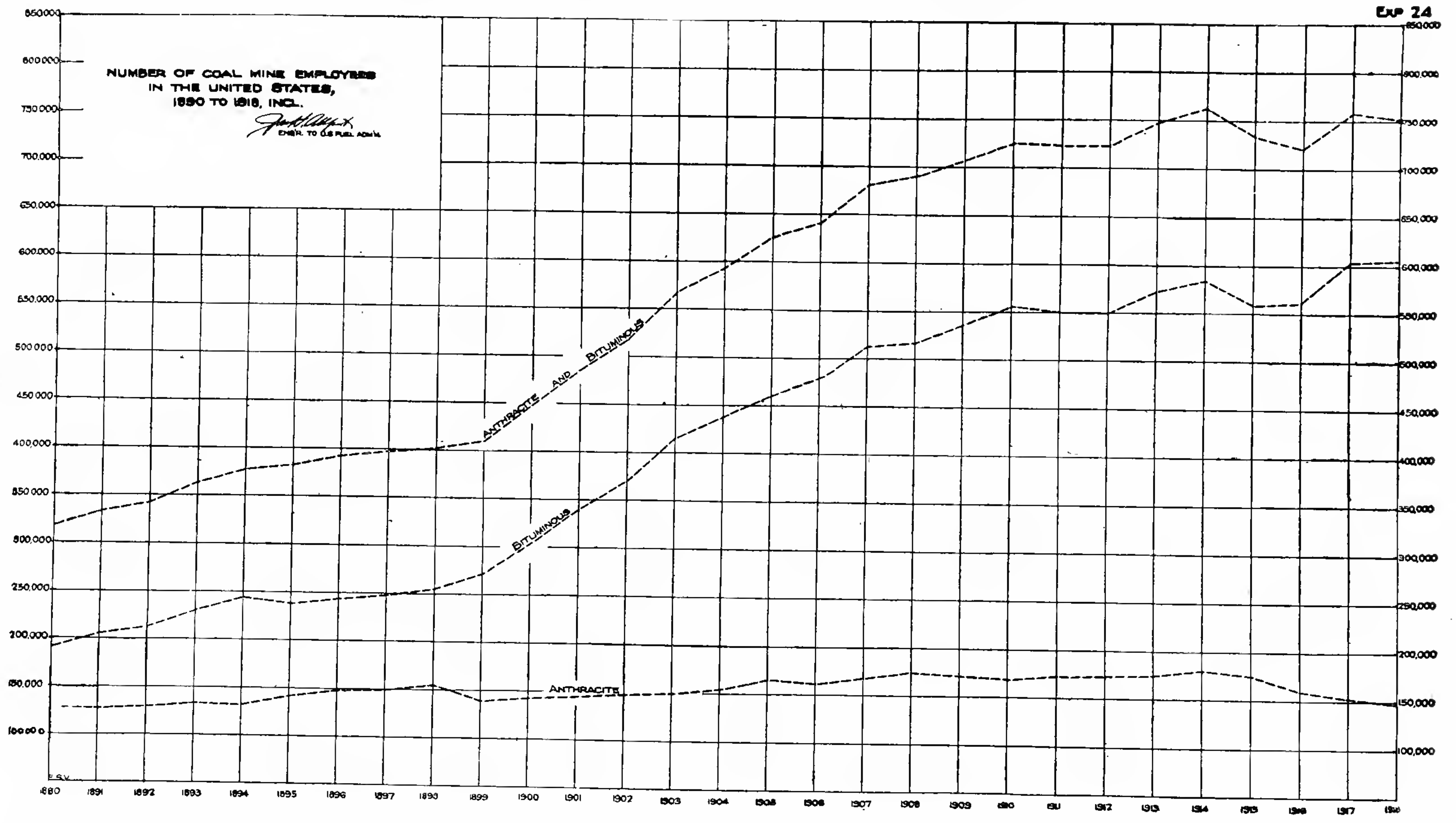
EXP. 22



COAL PRODUCTION
IN THE U.S. AND GREAT BRITAIN
IN TONS PER MAN PER YEAR,
1896 TO 1915, INCL.

ENGR TO U.S. FUEL ADMN.

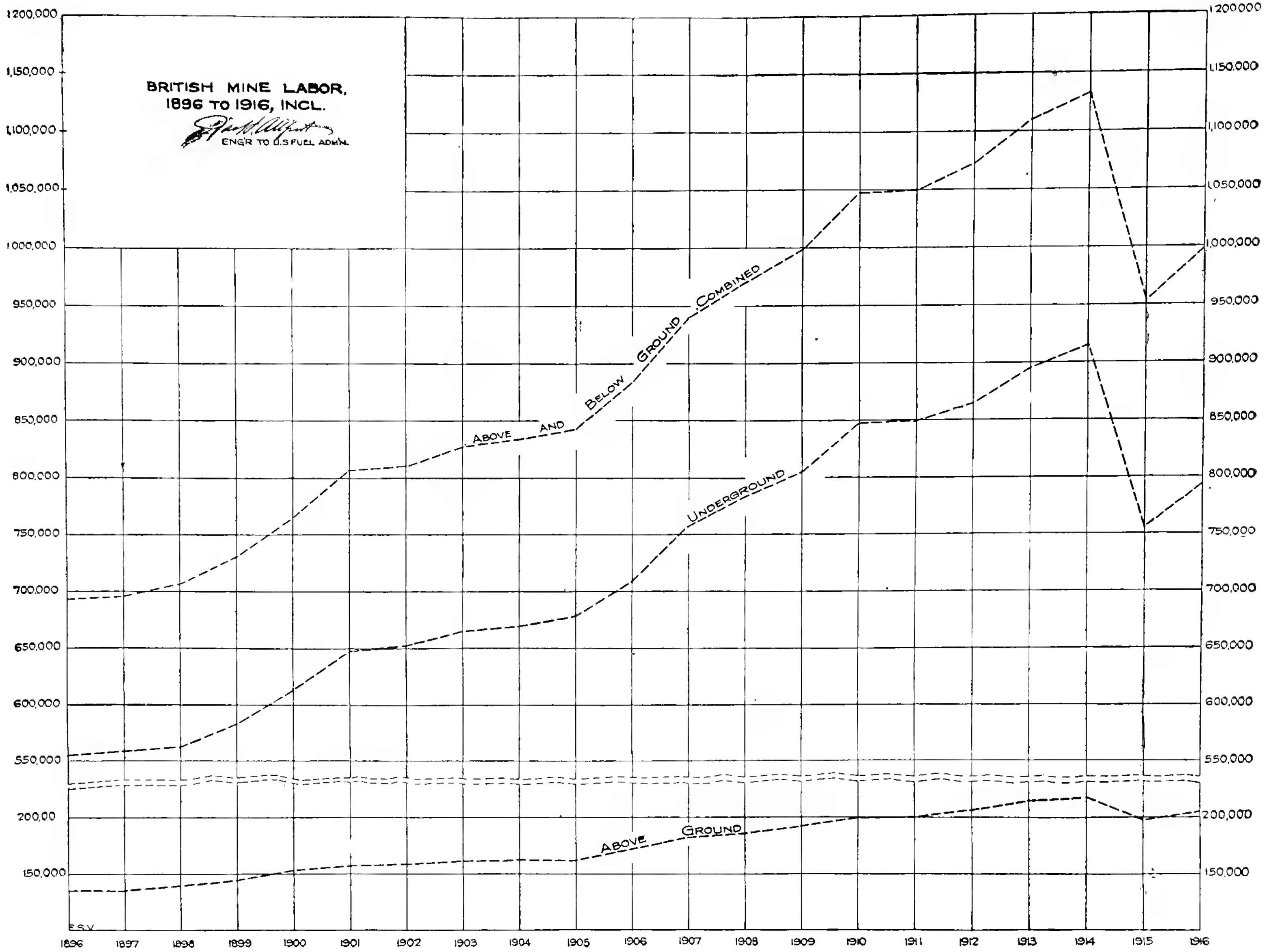
Exp 24



NUMBER OF COAL MINE EMPLOYEES
IN THE UNITED STATES,
1890 TO 1918, INCL.

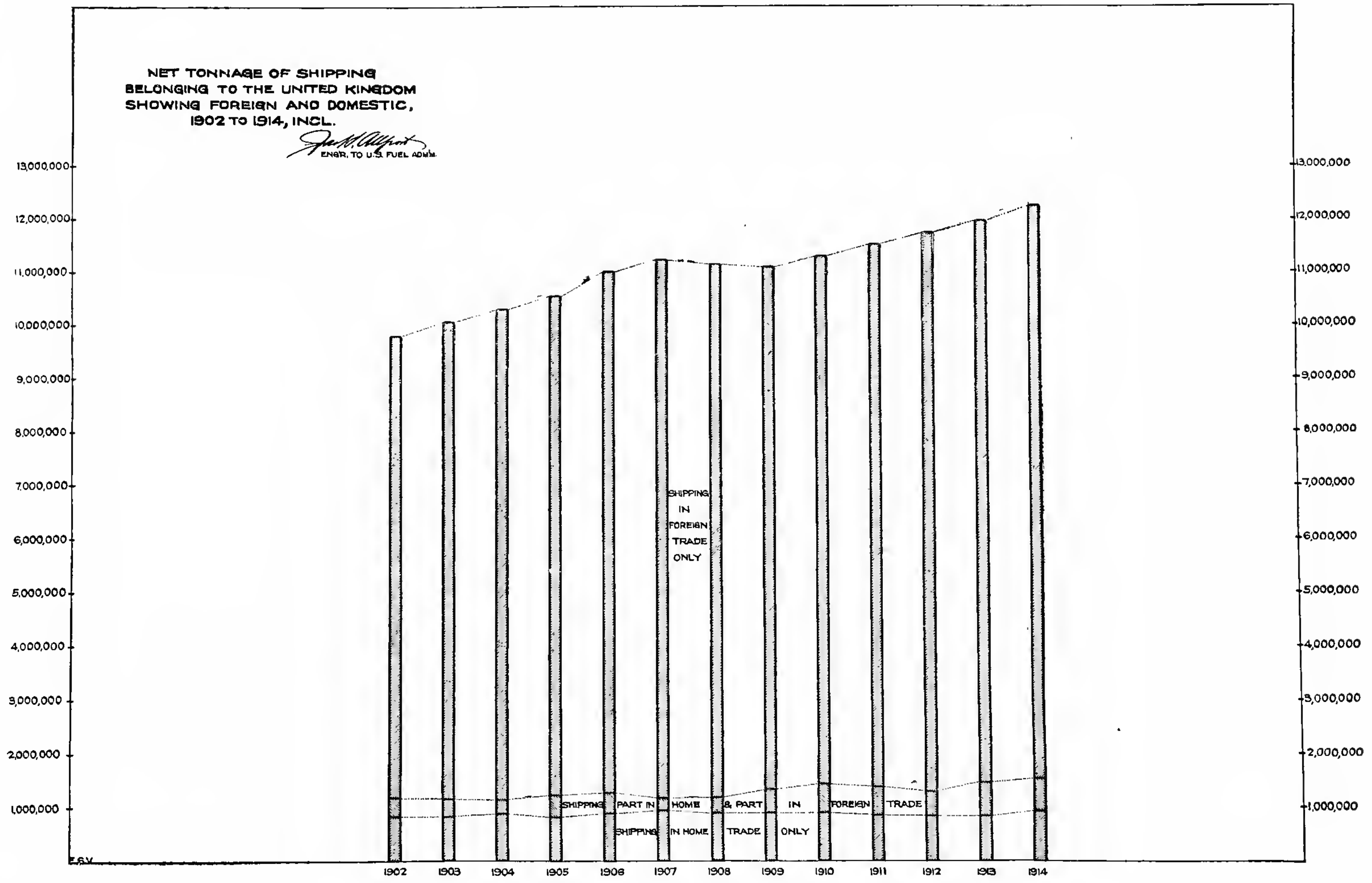
ENGR. TO U.S. FUEL ADM'N.

Exp. 25


BRITISH MINE LABOR,
1896 TO 1916, INCL.
ENG'R TO U.S. FUEL ADM'N.
ABOVE AND BELOW GROUND COMBINED
UNDERGROUND
ABOVE GROUND
1200,000
1,150,000
1,100,000
1,050,000
1,000,000
950,000
900,000
850,000
800,000
750,000
700,000
650,000
600,000
550,000
200,00
200,000
150,000
1896
1897
1898
1899
1900
1901
1902
1903
1904
1905
1906
1907
1908
1909
1910
1911
1912
1913
1914
1915
1916
E.S.V.

UNITED STATES FUEL ADMINISTRATION. REPORT OF THE ENGINEERS COMMITTEE.

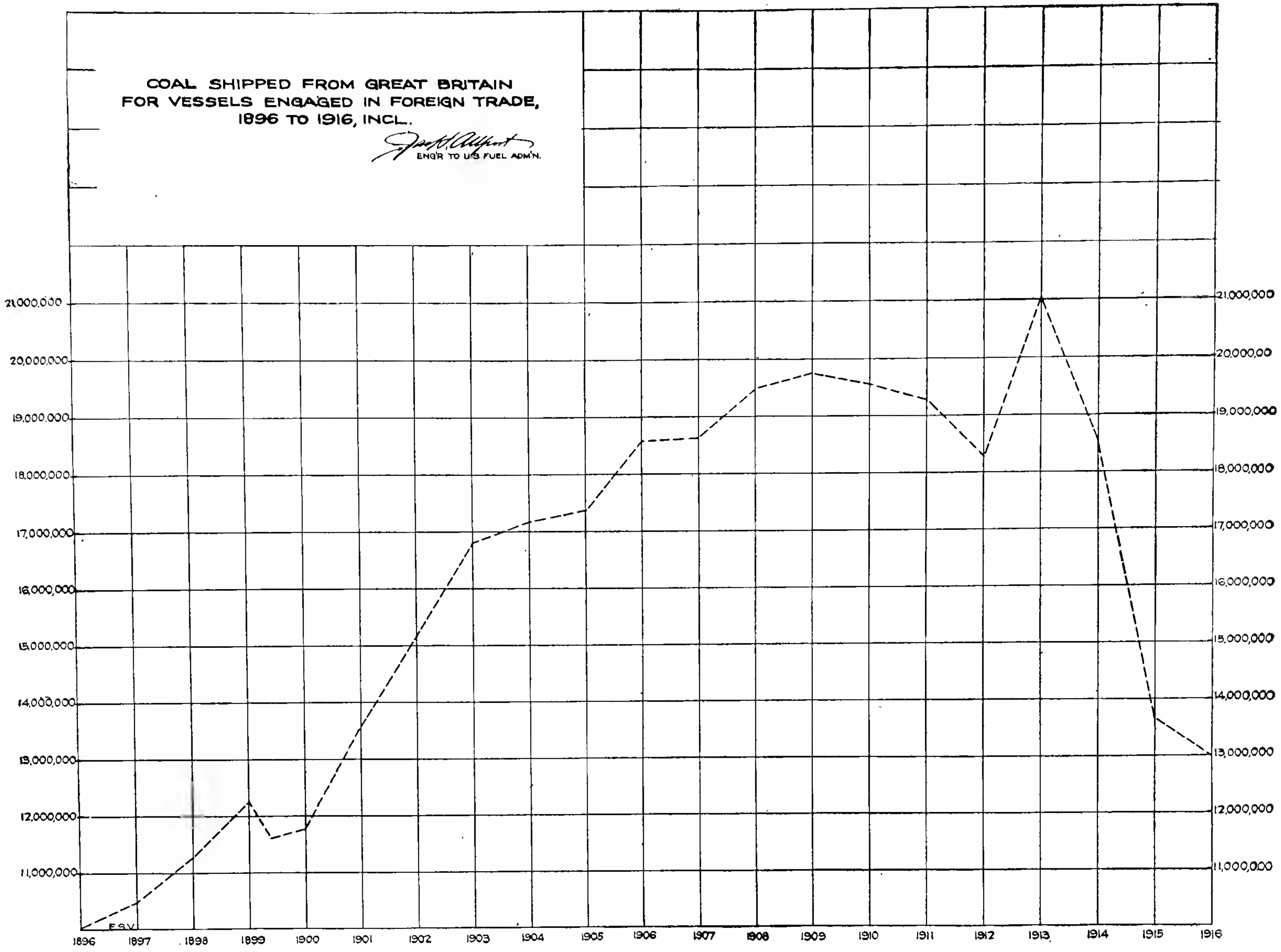
Exp. 26



NET TONNAGE OF SHIPPING BELONGING TO THE UNITED KINGDOM SHOWING FOREIGN AND DOMESTIC, 1902 TO 1914, INCL.

ENGR. TO U.S. FUEL ADM.

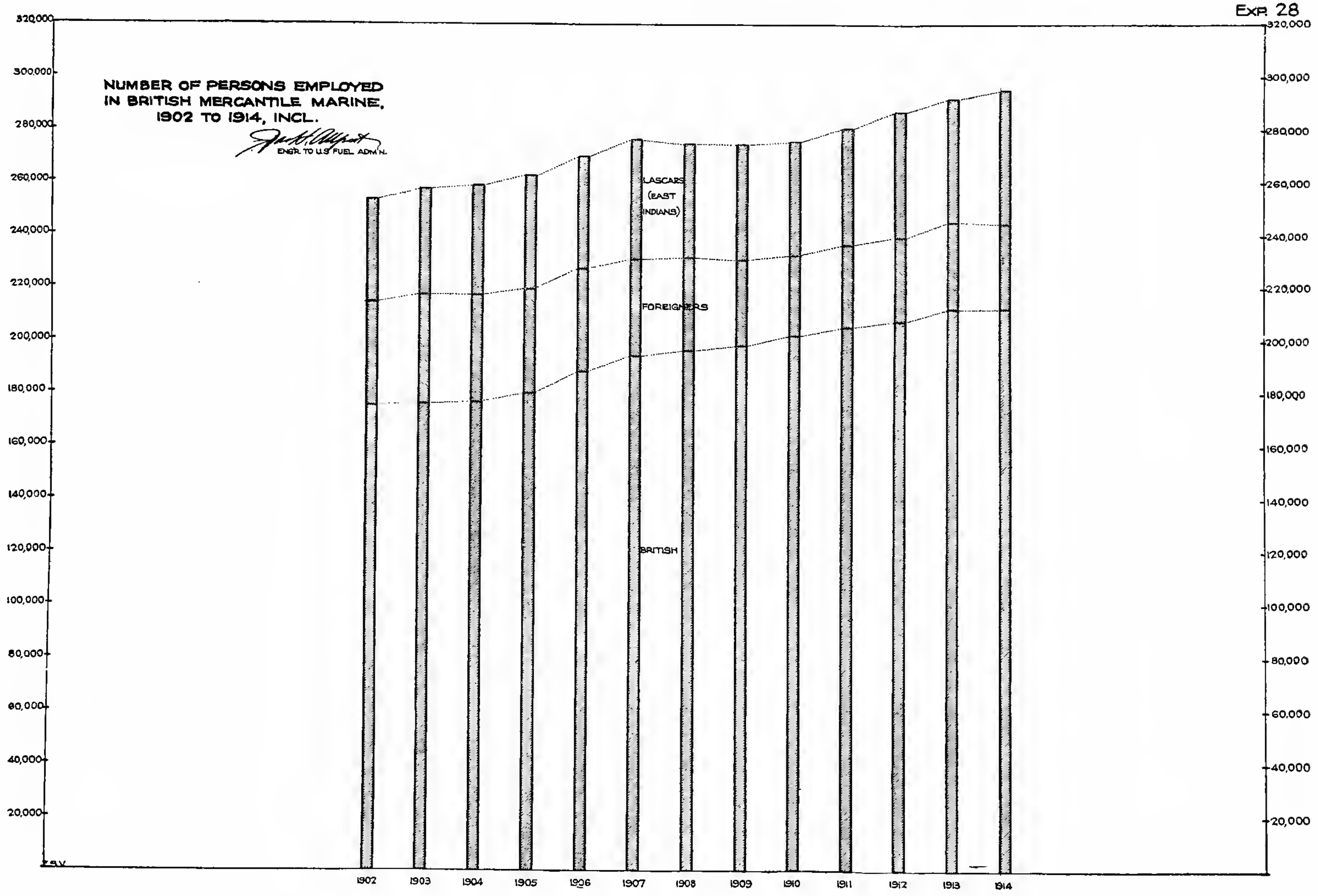
EXP. 27



COAL SHIPPED FROM GREAT BRITAIN FOR VESSELS ENGAGED IN FOREIGN TRADE, 1896 TO 1916, INCL.

ENG'R TO U.S. FUEL ADM'N.

Exp. 28



NUMBER OF PERSONS EMPLOYED IN BRITISH MERCANTILE MARINE, 1902 TO 1914, INCL.

ENGR. TO U.S. FUEL ADM'N.